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Virginia MEDICAL MONTHLY

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SYMBOLS OF SIGNIFICANCE

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THE PHYSICIAN'S RESPONSIBILITY TO HIS COMMUNITY*

JULIAN L. RAWLS, M.D.,
Norfolk, Virginia.

Presidential addresses usually take one of three forms: they are either a scholarly address on some scientific aspect of medicine, a biographical sketch of some illustrious disciple of Aesculapius, or a discussion on the economics of medicine. I have chosen the latter.

If we measure our evolutionary progress in five year periods, as do our Slavic neighbors, there has never been a five years that has marked such a change either in the science of medicine or in the provision for medical care as is occurring now. One of my earliest recollections is the problem of providing medical care, because my Father was a country practitioner and as a very young child I watched his concern, his deep and sympathetic interest in the illnesses of his neighbors. He had none of the scientific help in diagnostic machines and laboratory aids that his sons had, but he was a much better intuitive diagnostician than either of us. So, I have a genuine sympathy for those rural communities that are now so deeply in need.

Within the last generation people have suddenly realized that sickness is an inevitable occurrence in practically every one's life and the foreseeing individual has attempted to provide for the payment of that illness when it comes. The law of averages has taught us that if there is some way to spread out this cost over an entire community it is an advantage both to the individual who is ill and to his neighbor who remains well. Our experience in the pre-payment of hospital care has proven the soundness of this. We have been able to figure on the average days of hospital incidence in any given community. We know the per diem cost of hospitalization, so it is a very easy matter to figure how much we should charge for hospital care for persons in any large group. This idea is thoroughly sold to the American people and probably forty million in the United States have protected themselves against hospital expense, either through Blue Cross enrollment or old line insurance companies. Much more recently it has been felt that it is also possible to anticipate the cost of medical care and groups of individuals offering medical coverage are appearing to provide for the catastrophic illness which throws the average American family off its balance and causes it to stagger and stumble along for six months or a year in an attempt to regain its financial equilibrium. The head of that same average family can usually take care of the cost of routine office calls and house visits that might be needed and, if he is an honest American, he does not take very kindly to having a paternalistic government select his physician and pay him.

The American Medical Association feels that the voluntary non-profit plan for pre-paying medical care is the best insurance we have against the federalization of Medicine. It feels that the quicker the Medical Profession realizes this, the sooner the people will protect themselves against unexpected illness and the sooner the Government will desist from trying to force socialized medicine down their throats. It urges that all doctors become members of a Plan to provide this care. The fees may be slightly lower than our private charges, but they are much higher than those that would be paid by federal agencies.

It has been stated that the American people, from a medical standpoint, are very poorly provided for.

*Address of the President at the annual meeting of the Medical Society of Virginia, at Virginia Beach, October 14, 1946.

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We have all kinds of statistics to prove this. One set of figures that has been widely quoted since the beginning of the War is the large percentage of draftees rejected by their Boards. However, when this has been boiled down it has been found that a very small part of those rejections was due to lack of medical care. A very high percentage was due to illiteracy and many more were for physical defects that could not have been remedied by any form of medical treatment. Recently, a more startling disclosure, about which we hear very little, has been made: this is that the percentage of rejections in the British Isles, where they have had socialized medicine since 1911, was much higher than in the United States.

It is admitted that there is a definite shortage of physicians all over the United States, particularly in rural communities, and Virginia is no exception. Only 12 per cent of the doctors in rural Virginia are under 60 years of age. So, if we expect to provide these areas with medical care, we must induce young doctors to settle in the country. From day to day medicine is getting to be more of an exact science. It is no longer a question of guess work. Doctor John B. Murphy once said that a properly trained physician should be able to make a diagnosis from an accurately taken history. I am very much afraid that many of us are not so well trained as was Doctor Murphy. We frequently need help that the patient himself cannot supply. We need the x-ray and the laboratory and our rural communities should have them.

Our State Commissioner of Health made a valiant effort to provide for this with our last Legislature. He accomplished much but not all at which he aimed. The Legislature appropriated $10,000.00 to make a survey to see where there is the most need for medical facilities and care. That survey is now under way. They were asked to appropriate sufficient money to establish at least six health centers in those districts of the State in which they are most urgently needed. A health center consists of a small hospital of from 15 to 25 beds with a diagnostic x-ray unit and laboratory facilities. None of this money was appropriated. The passage of the Hill-Burton Bill by the Congress in August provides 40 per cent of that money out of the general federal tax funds. So far no provision has been made in Virginia, either out of State funds or private funds, to raise the 60 per cent which must come from the State. In other words, if we do not use Virginia's share of that money, and it would amount to around two and one-quarter million dollars, before the fiscal year ending June 30, 1947, we, as Virginians, will have put into the general funds of the United States Treasury that amount of money for which we will get no returns. We should see that local funds and state funds are made available for this matching.

However, the Legislature did provide for ten scholarships in each of our two medical colleges to be given to worthy young students who would agree to practice one year in a rural community for each year that they used the scholarship. It is not fair to these young doctors to ask them to go to the country without the opportunities and facilities to practice the scientific medicine to which they have been accustomed.

Well meaning social workers and, I hope, equally sincere politicians think they have found a panacea for all of our medical woes in the Federalization of Medicine. We, of the Medical Profession, feel that they are visionary in the extreme. It has never been the history of political medicine that it has been satisfactory either in this country or in any other country in which it has been tried. It usually leads to the deterioration of medical care, to dissatisfaction, both by the patient and by the doctor. The demands on the physician are multiplied beyond measure and frequently without justification. The quality of medical care has just as persistently gone down. The cost, when we evaluate the service rendered, is staggering and prohibitive. There are certain things that are definitely within the province of Government; for instance, the prevention of the introduction of communicable diseases from foreign countries; the prevention of the pollution of our water sheds and the contamination of our public streams.

It is within the jurisdiction of the State Health Department to provide means of preventing such communicable diseases as smallpox, diphtheria, typhoid fever and the like: diseases that are definitely controlled by inoculation and vaccination. We also feel that the control of venereal diseases, the care of the mentally ill, of tuberculosis and of cancer are governmental problems.

We also know that there are certain classes in our community that, from a medical standpoint, are financially unable to make provision for themselves. Sometimes it is due to circumstances over which

they have no control. At other times the individuals are temperamentally unfit to provide for themselves and so become a problem of the community. We feel that provision should be made for these people out of tax funds and that those funds should be provided by both federal and state governments on a definite ratio. However, the money should be spent at state levels and always the need of medical care should be vouched for by the medical profession and the indigency by welfare agencies trained and equipped to evaluate the patient's needs.

The last Legislature placed in the budget of the State Department of Health three hundred thousand dollars for the biennium to provide for the hospitalization of the medically indigent on a matching basis—the State to pay half of the hospital cost and the counties and the cities to pay the other half. The next Legislature should probably double this fund. Our Health Commissioner is now working on the plan for carrying out this bill.

The ten point program of the American Medical Association for the improvement and better distribution of medical care calls for the active support of every doctor in the United States. The leaders of our profession feel very definitely that the indifference of the rank and file of physicians to the things which go to make up our community life is largely responsible for the fact that the guiding and planning of medical care is being taken out of the hands of the profession and is being turned over to social workers, to interested laymen and to politicians. May I tell you a few of the things it is felt should interest you as doctors in your respective communities? You should know the attitude of your State legislators and of your national representatives in Congress to the various things that go to improve the living conditions in your country. It is too late to find out the attitude of your Congressman to certain bills after those bills have already been introduced into committees. As an example, we asked a congressman his reaction to the Wagner-Murray-Dingell Bill and his reply was, "There have been eleven thousand bills introduced into Congress. It would be utterly impossible for any of us to familiarize ourselves with the provisions of all of those bills. Consequently, we are guided largely by the recommendations of the committee to which the bills are referred." In other words, if a bill succeeds in getting out of the committee and goes to Congress for a vote, it is very apt to be passed. As doctors, it behooves us to become familiar with the legislative activities which we feel concern, not only the medical profession, but the health of the state or country as a whole.

Our problem then, is to see that our state and federal legislators be told the effect on our people. They should have our personal communications on pending legislation concisely and succinctly stated, in order to save their time. Then we should see that the leaders in our individual communities fully appreciate the needs and opportunities offered by this legislation. Do not feel that the other fellow will do it. It is your responsibility and mine, and the leaders of our profession say it is our indifference, our lack of interest, in the civic activities of our communities, our more or less parasitic existence, which has brought us to our present pass.

Along this same line I would like to refresh your memory of the story of the efforts of the cultists to secure recognition in Virginia and to prey on those who are so unfortunate as to be sick. They have claimed persecution by the Medical Profession and have almost succeeded in convincing intelligent legislators that the only reason we have been interested in keeping them from securing a license is the financial harm they might do the Profession. As a matter of fact, that side of the situation has never concerned us. What we have been most interested in is their failure to recognize curable conditions until it is too late, and, what is even worse, of guaranteeing cures to the hopelessly ill. Previous to 1913 there was no law regulating cultists in Virginia. At that time a Bill was passed requiring that all who desired to treat the sick must be licensed by the State Board of Medical Examiners. Since the Bill could not be made retroactive it allowed all who could prove that they were practicing in Virginia prior to 1913 to obtain a license without appearing before the Board. Some eight or nine chiropractors were admitted under the so-called Grandfather Clause. From then until 1944 they made repeated attempts to be allowed to set up a Board of their own and to license the graduates of their own schools. In 1944 the Legislature passed an Act putting on our State Board of Medical Examiners two chiropractors and one naturopath to pass on the qualifications of their own particular cult. But the same Act also required that all individuals licensed to treat the sick must take the same Basic Science Board. That was a death blow

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to the cultists. They could no longer claim that they were being persecuted and not allowed to practice their particular brand of the healing art. That opportunity was being given them provided they could prove that they knew the fundamentals of the cause of diseases.

They immediately tried to introduce another Grandfather Clause permitting all who could prove that they were practicing in the State previous to 1944 to be given a license without the necessity of taking this examination. That Bill was killed. In 1946 it came up again and the interesting thing is that some of the most intelligent members of our legislative body voted in favor of this effort to circumvent the basic principles of the art of healing the sick. They have already given notice that a similar Bill will be introduced in the 1948 Legislature. It is quite evident that the efforts to defeat this Bill should be made by every doctor in the State of Virginia. We should see that our own representatives in the Legislature fully appreciate the significance of the attempts to turn loose in Virginia some seventy-five men who have not the slightest idea of the causes of diseases or how to cure them. This is our task. Please see that you make it your business to know personally your legislators and to see that they are properly informed.

For generations the practice of medicine was an individual thing. Doctors stood alone. Gradually they began to feel the need of other doctors. From this came the formation of clinics; of group practice and, in time, the birth of the specialization of medicine. At the present time there is need of an even greater consolidation of our profession. I am not advising that we carry this to the point that Labor has done, but we can learn a good deal of what can be gained by strength in union. The day has passed when doctors can practice medicine as individuals even in the scientific sense. Just as we need the cooperation of our brother practitioners in the care of our patients, just as certainly do we need the united opinions and the united actions of the entire medical profession in accomplishing the things we have set out to do. This year our Public Relations Committee felt this so strongly that it asked the Council to set up a Public Relations Department with a Director in charge. His purpose is twofold; to act as a Liaison Officer between the county societies and the State Society and to disseminate knowledge and understanding between the general public and the medical profession. We have also learned from Labor that it is necessary to have funds to accomplish any of the things that are worth while. We knew that if we were to carry on with this Public Relations Department it would be necessary to increase the dues of the Society. The small sum that we have been paying a year is almost infinitesimal in comparison with the dues of most of the State Societies. The increase that we are asking is much less than that of almost all of the societies which have been outstanding in what they have accomplished for the good of the medical profession. If we expect our Profession in Virginia to take the place which it should in our care of the citizens, it is necessary that there should be an increase in our dues. It is small as compared with what we pay for golf clubs, social activities and so forth.

I spoke a few minutes ago of the cooperation on the part of the entire medical profession. The Medical Society of Virginia has less than 2,000 members. I have been told that there are nearly 1,000 physicians practicing in Virginia who are not members of our Organization. This is entirely wrong. Every reputable physician in the State should be a member of the State Medical Society and every effort possible should be made to find out why he is staying out. The Councilors of the various districts should make it their business to see that he becomes a member of his County and his State Societies. We want his interest and his cooperation. Only in this way can the Society grow in strength and usefulness. I have felt this so keenly, I have asked our new Director of Public Affairs, Mr. Johnson, to make it one of his duties to see that the Councilors of the various districts are informed of the ethical doctors in their area who are not in the Society. I hope when this year is over your incoming President can tell you that he has succeeded in enrolling every reputable physician in the State. Let us determine tonight that we will accomplish this.

I am sure that all of us have read with a great deal of concern the criticisms (which have been appearing in the lay press) on the care of the mentally ill in the United States. If we are at all frank about it we have to admit that the medical profession has been negligent in its care of these unfor-

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tunate people. Apparently, what started the investigations that led to the magazine articles, was the report made by conscientious objectors who had been drafted and then placed in mental hospitals as orderlies because they refused to do military duty. It is not very pleasant to have to realize that the criticism of the kind of treatment these unfortunate individuals receive came from lay people.

Our Committee on Mental Hygiene has submitted to us a very illuminating report on the per capita appropriation for the care of the mentally ill in Virginia. I urge you to read it carefully.

Let us look briefly at some of the things that your State Health Department has already done for the improvement of living conditions in our Commonwealth and at some of the objectives for which they are still striving. At present, there are fifty-one counties in the State which have the benefit of a local health service. As soon as personnel is available, sufficient appropriations should be given the Department to provide this service for every county in the State. Sixteen additional counties have made appropriations, but the personnel is not now available.

The last Legislature appropriated money for a survey of all school children in the State; however, it did not make any appropriation for the correction of remedial defects for children whose families were unable to pay for it. This should be one of the primary objectives for our next Legislature. No child in Virginia should be allowed to go through life physically handicapped because of defects in vision, in hearing, or other deformities, which are correctable in youth. Each year sees us better equipped to detect early tuberculosis and to provide for its care. The same should be equally true of the disabling effects of acute infectious endocarditis.

Sufficient funds should be placed in the hands of the State Health Department to provide for the victims of cancer and to provide for proper terminal care for these unfortunates. We are too short of hospital beds in the general hospitals to house these people for indefinite periods for nursing care. Homes for incurables are usually some distance from their families and we always hate to condemn people who have a long period of hopeless illness before them to spend that time among strangers. But it is a fact that a good many of these families are utterly unable to provide care for them in their own homes. It is always a daily problem for those of us who are associated with Cancer Clinics to know just what to do with them. The funds raised by voluntary subscription are inadequate to care for both the hopeful and hopeless cases. This should be a state and community responsibility. The last Legislature was asked to make some provision for them. It appropriated $13,500.00 a year for the two years to make a survey of the amount of cancer in the State. It is thought that, probably, the figures will be so startling that in 1948 we may have a more responsive Legislature to the needs of these unfortunates. The traveling clinics and x-ray units, supplied by the State Health Department, and the Anti-Tuberculosis League, are annually lowering the death rate in tuberculosis. There is every reason to feel that a similar study on cancer will increase the curability of patients, because we will see them earlier.

The State Health Department, with the aid of the Public Health Service, is making a valiant effort to stamp out venereal diseases. It is fairly well acknowledged that both victims of syphilitic and Neisserian infections can be rendered immune in about two weeks' time if properly treated with sulfa drugs and penicillin. Our Health Department will supply us with the drugs. It is up to us to use them.

I visualize Virginia as a land of plenty, its citizens a happy people, free from want, free from crippling diseases. I also visualize the medical profession as the outstanding agent which will accomplish this. It will require our untiring efforts, a devotion to duty, which the medical profession has always shown, and I am sure that we, of this generation, will carry on with the aims and objectives which our fathers gave us to the end that our children and our children's children will know neither want, nor care, nor physical disability, that we, as a profession, can prevent.

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CHOICE OF ANESTHETIC AND AVOIDING COMPLICATIONS*

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Before presenting my ideas in regard to the choice of anesthetic agents, I believe it would be quite fitting to briefly summarize the present day concepts of the theories of anesthesia and review the physiology of respiration as it concerns the anesthetist. I mention this because most medical schools present very little information to the student concerning anesthesia and its problems.

Anesthesia has been defined as the art or science of rendering a person insensible to pain. The explanation of the action of local anesthesia is simple; by means of various agents injected into or around nerves, we interrupt the flow of afferent stimuli and prevent their passage on to the higher centers in the cerebral cortex where they would be interpreted as painful sensations.

As regards general anesthesia, the cerebral centers are gradually depressed until they have lost their ability to function in a normal manner. Exactly how this depression takes place has never been satisfactorily explained, but we have various theories in regard to the actual mechanics of the depression. A good premise upon which we can start is that the brain cells are the most highly developed cells of the body. Consequently, they have a high metabolic activity and need more oxygen than other cells in the body. This furnishes us the reason for the very bountiful blood supply to the brain.

The method of action of the anesthetic drugs when they come in contact with the brain cells is a complex affair and of the many theories advanced, none has been universally accepted. All of our anesthetic drugs have a high fat-solubility and it is true that the higher the solubility ratio of a drug, the more potent is its anesthetic qualities. The anesthetic drugs seem to have a predilection for the brain cells. This has been shown by analyses of various tissues in the bodies of animals to whom an anesthetic has been given. The brain cells have a higher content of the drug than the other tissues of the body.

*Read before the Virginia Peninsula Academy of Medicine, Newport News, April 15, 1946.

The theories of cerebral depression fall into two main groups: one, that the drug acts directly on the intracellular protoplasm in such a way that its receptivity or ability to use oxygen is gradually lessened. The second group base their beliefs upon the premise that the drugs alter the permeability of the cell membrane which results in a gradual lessening of the amount of oxygen passing through to the cell protoplasm. Whatever the *modus operandi*, the net result is a gradual lessening of the amount of oxygen available for the metabolism of the cerebral cells which causes increasing depression and anesthesia.

The higher faculties are those first affected, namely, thought and perception. Loss of muscular sense and coordination of movement soon follow. Then we have the loss of tactile and special senses, at which time the patient is considered to be in the state of analgesia. Practically the last special sense to be lost is that of hearing which should always be borne in mind by those present during the induction of an anesthetic. Muscle tone gradually disappears and the elimination of the various reflexes begins. At this point the patient is considered to be in the state of surgical anesthesia. If the anesthetic is continued beyond this point of depression, we have a gradual loss of function of the vital medullary centers controlling respiration and circulation.

The cells of the nerves themselves are affected to a much lesser degree and, especially during light anesthesia, the cerebral cells are constantly being approached by the afferent impulses but in their depressed state they do not function and no pain is realized.

It must not be assumed that all oxidative and metabolic processes are entirely suppressed by anesthesia; on the contrary, they are only diminished, and when the anesthetic agent is removed there is complete recovery of cell function. In anesthesia, we endeavor to maintain the normal oxygen tension in the blood, at times considerably exceeding the normal percentage, but due to the peculiar action of the anesthetic agents in use the ability of the brain cells to utilize the oxygen at hand has been lessened

to such a degree that anesthesia has resulted. Of course, we can produce unconsciousness by simply depriving an individual of his normal supply of oxygen. This may be demonstrated by the administration of an inert gas such as nitrogen. In such an experiment, all the cells of the body suffer from anoxia. It is true the nitrous oxide which is one of our oldest agents and also one of our less potent drugs does lessen the percentage of oxygen in the blood but that does not mean that its anesthetic action is due to that property alone. For instance, let us consider an elderly anemic patient who is quite wide awake in normal air which contains oxygen 20.96 percent, nitrogen 78 per cent, and a small percentage of other gases. Let us administer a gaseous mixture containing the same amount of oxygen but substitute nitrous oxide for the nitrogen in the mixture and the patient promptly loses consciousness and may attain a fair degree of relaxation. However, the presence of nitrous oxide in the blood does decrease the oxygen-carrying capacity of the red blood cells and for this reason, nitrous oxide is not considered a suitable anesthetic for long operations in patients suffering from myocardial damage where the heart muscle needs a liberal supply of oxygen.

The purpose of respiration is two-fold in character—to obtain oxygen and maintain its normal percentage in the blood, and to eliminate carbon dioxide, the end product of oxidation. A number of different muscles are employed in the act of respiration. The diaphragm in contracting lowers its concavity in the chest and pushes against the abdominal viscera, thus enlarging the thoracic cavity. When it relaxes, the abdominal muscles contract to aid in restoring the diaphragm to its thoracic position. The external intercostals contract and elevate the ribs during inspiration, following which the internal intercostals contract and depress the ribs. The sterno-mastoid, pectorals and trapezius which are often called the accessory muscles of respiration are used only in emergencies, such as obstruction to respiration or very deep anesthesia where the act of respiration is not furnishing a sufficient amount of oxygen for the body metabolism.

The unconscious control of respiration by reflexes was once thought to be a relatively simple matter, but as a result of experiments in respiratory physiology the accumulating evidence of the various interrelations between respiration, circulation, and the tension of gases in the blood is overwhelming. It has been indicated that the true situation is quite complex and to discuss the physiology of respiration would take a whole evening. However, I will mention briefly some of the principal reflexes which influence the character and rate of respiratory movements. The coordination of respiration is regulated by the respiratory center in the medulla. Its action is greatly influenced by outside stimuli. Decrease of the percentage of oxygen in the blood would depress the center were it not for a compensatory reflex criginating in the carotid sinus and aortic arch. Chemoceptors in the carotid bodies and aortic body which are sensitive to the carbon dioxide tension in the blood also affect respiration. The Hering-Breuer reflex originating in the alveoli of the lung starts inspiration, arrests it and starts expiration as a result expansion and collapse of the alveoli. Pain, excitement, fear and rage also affect the respiratory center. Changes in the pH of the blood, fall in blood pressure, along with the changing tension of gases in the blood will affect the rate and volume of the respiratory movement.

When one is faced with the decision of selecting the agent of choice for a particular patient, many wide and varied facts must be considered. The point of prime consideration is the safety of the patient. Our desire is to produce suitable anesthesia for the surgeon, whatever the type of operation, and at the end of the operation have a patient in excellent condition who will be free of all postoperative complications.

For the average patient, in good physical condition except for the surgical problem confronting us, practically any of the common agents in use at the present time are safe providing one realizes the capabilities of the agent and does not try to force the anesthetic in order to obtain additional relaxation. In other words, for ordinary cases the approved anesthetic agents are safe, but they may be made extremely dangerous by the person administering them. We could paraphrase the old maxim and say "It's not the anesthetic but the person who administers it". If the anesthetist does not take chances, is capable of dealing with unusual occurrences, and does not venture beyond his experience, then the risks to which a patient is exposed are negligible.

One is faced, first, with the problem as to whether to use local or general. Recent advances in both general and local anesthesia have broadened the

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field for their use. Our decision will be affected by the temperament of the individual and his desire for local or general. An anesthetist is subject to the charge of legal assault if he administers either against the wishes or without the consent of the patient. Surgeons usually have become accustomed to one or the other and have very definite preferences as to whether local or general is used. In some parts of the country local is used whenever possible, while in other parts of the nation the idea of general anesthesia prevails. The absence of a trained anesthetist in whom the surgeon has faith often leads him to depend on various types of local anesthesia. Carefully kept records show that, as regards post-operative complications, there is little choice between local or general anesthetics.

The real problem of the anesthetist in choice of an anesthetic presents itself when the patient is a bad risk. The patient may be suffering from acute or chronic respiratory infection, diabetes, or hypertension and myocardial disease. The elderly and very young also present a particular problem. Upon our decision in cases like these may depend the very life of the patient.

In regard to children, I firmly believe that all children except babies should receive some pre-operative medication. Psychic trauma incurred during the induction of an anesthetic can affect all future medical care of that child. The induction of an excited child is never conducive to a smooth general anesthetic. The barbituates are well tolerated by children and nembutal particularly is favored by many of our medical men. For the average child, the dosage by mouth is usually ¾ gr. for age 2-5; 1 gr. for age 6-9; and 1½ gr. for age 9-12. If given rectally the dosage is increased and may be given either as a suppository or dissolved in 15 cc. of water which is injected with a small catheter attached to a syringe. Avertin in small doses is also to be recommended. One should endeavor to have the child asleep when the time for induction arrives. As an induction agent for children, I have long had a preference for nitrous oxide. Induction is rapid and may easily be started on a sleeping child by holding the mask with the gas flowing just above the face of the patient. Thus the child never wakes up and has no fears in regard to going to sleep in the future. Other induction agents are vinethene and ethyl chloride which give satisfactory results in the hands of those who prefer them. For many short operations, the above agents are all that are necessary. For long operations, the drug of choice is ether administered by the semi-open drop method. For very young children it has been the usual practice to start them with drip ether. A supplemental supply of oxygen is given throughout the operation, and by suction the respiratory passages are kept free from mucus. Local infiltration may also be used in very young children provided the child has received sedation. The sedation may be supplemented by intramuscular injection of sodium luminal. In chest operations on children ether or cyclopropane may be used. Some children do not tolerate cyclopropane very well, but on account of its rapid action, the high concentration of oxygen and the shallow respiration, it greatly facilitates the ease of operation. All open chest cases should first be intubated.

The aged and those suffering from long general debility present a common problem. On account of their lowered resistance, a weak anesthetic can often be used satisfactorily. For many minor operations a weak solution of sodium pentothal given intravenously with an adequate supply of oxygen by catheter or mask is the ideal anesthetic. For major operations, the pentothal is supplemented by inhalation anesthesia, the nature of which depends upon the relaxation required; often a mixture of nitrous oxide 50 per cent and oxygen 50 per cent is sufficient. If not, a weak mixture of cyclopropane and oxygen or ether and oxygen is used. Pentothal alone very often depresses the respiration so much in long operations that we feel it increases the risk of post-operative pulmonary complications. The addition of a small amount of inhalation anesthesia reduces the amount of pentothal used, increases the depth of respiration, prevents the tendency of parts of the lung becoming atelectatic, and encourages a more rapid recovery from the anesthetic agent. Local infiltration or nerve blocks work well and are practically without hazard. A low spinal with a minimal dose for work on the lower extremities or around the perineum is an entirely safe procedure. Practically all our perineal prostatectomies are performed under low spinal; the drug commonly used is novocaine crystals in a dose of 75-100 mgm. Upper abdominal operation under single dose spinal is not without its hazards which may be either circulatory or respiratory. The inauguration of continuous spinal has decreased the risk and has en-

joyed extreme popularity in some parts of the country. It has always been our desire to have a patient leave the operating room with their blood pressure near their normal reading. The vasomotor system of the elderly or debilitated is not as labile as that of a younger person and they cannot compensate quickly for the fall in pressure that often occurs under a high spinal. It is necessary that these patients be watched carefully and proper restoratives be immediately started if there is a marked fall in pressure. A recent addition to our list of drugs may be used to considerable advantage in the elderly patient. I refer to intocostrin, the refined product of curare. Added in minimal doses to a very light anesthesia it gives relaxation resembling that of spinal anesthesia. The effect of intocostrin lasts for approximately 30 minutes at which time the dose may be repeated if necessary.

In hypertension and cardiovascular disease it is essential to make the choice of an agent which will not excite the patient and will not increase or materially decrease the blood pressure. Excitement during the induction of these cases should be avoided by all means. In cases of extensive myocardial damage, the agent should be of such a nature that it does not increase the irritability of the heart muscle; in these cases the use of cyclopropane should be avoided if possible. Our most frequently used agents are pentothal alone or in combination with ether and oxygen which may be given by open drip or by the rebreathing method. Whatever the agent, a careful constant check on blood pressure and the rate and rhythm of the pulse is required. Cyclopropane is used only where there is no history of fibrillation or coronary disease. If spinal is used, it should be confined to operations on the lower part of the body, for upper abdominal operations may, as a general rule, be performed more safely under general anesthesia.

In the presence of an acute respiratory infection, all operations except those of an emergency nature should be postponed until the pulmonary condition has improved. In case of an emergency, the agent of choice is local. Pentothal and cyclopropane, used separately or combined, may also be used as a general anesthetic without any deletericus effects.

For many years it was considered that the use of ether in pulmonary tuberculosis was to be avoided at all costs. For that reason local or one of the non-irritating gases were used. However, since the advent of chest surgery, it has been found that ether given by the absorption technique or by semi open drip has no more harmful effect than the other agents; and many times the surgeons say that the post-operative course is better than when other agents are used. In other words, we have come to assume that the irritation and flare-up of tuberculous lesions in the lung are a result, not of the anesthetic in use but as a consequence of the lowering of the general resistance of the patient.

In diabetes the problem has been simplified by recent advances in laboratory work and methods of control of sugar metabolism. Any agent selected, with proper pre-medication and careful post-operative treatment should be satisfactory. One should choose those least likely to disturb the metabolic activity of the patient. The agents commonly used are local, nitrous oxide, pentothal and cyclopropane.

Until recent years, all eye surgery was performed under local anesthesia. This was due to the nausea which resulted from general anesthesia. As a result of retching severe complications in the operative eye often resulted, such as loss of vitreous and detachment of the retina. Pentothal is a drug which, when used alone, very rarely causes any nausea and is being used more widely all the time in ophthalmological surgery. Oxygen by catheter is used to prevent the least amount of anoxia.

In regard to complications of anesthesia one will find that very few are encountered if proper precautions are taken to prevent them. Following are a few rules which, if followed, will enable us to avoid many disturbing experiences:

1. Suitable pre-operative medication to insure a quiet, calm patient.

2. A smooth quiet induction conducted in a confident and assuring manner.

3. Maintenance of a perfectly free airway at all times; suction to remove mucoid secretions; intubation if necessary. Intubation in all open chest work.

4. Insurance of an adequate oxygen supply at all times. One must bear in mind that some patients need more oxygen than the average, namely: Anemic patients; hyperthyroids; toxic individuals, especially those with high fever; pregnant women; and very young children.

5. Careful record of blood pressure, pulse and respiration.

6. Maintenance of pressure near the individual's

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normal by means of glucose, plasma, whole blood and vaso-pressor drugs.

7. Prevent accumulation of carbon dioxide in the blood by assuring yourself that the absorber is in good working condition.

8. Use an anesthetic agent suitable for the relaxation required. Never force an anesthetic.

9. Avoid the use of adrenalin during the administration of cyclopropane. If arrhythmias appear under cyclopropane, lighten the anesthesia. If they do not disappear, introduce a small amount of ether vapor and if that is not successful it would be wise to discontinue the cyclo and employ another agent.

10. Proper precautions should be taken when using explosive anesthetics. A small amount of water should be kept in the re-breathing bag to insure a high humidity.

11. Preliminary atropine to decrease the secretions and to lessen the chance of laryngospasm.

12. Sneezing during the induction of pentothal anesthesia may be stopped or prevented by a few drops of cocaine 2 per cent in the eye which reaches the nasal passages by way of the tear ducts.

13. Preliminary barbiturates are useful in all forms of local anesthesias to prevent drug reactions.

14. Readiness at all times to institute artificial respiration if required.

15. Remove mucoid secretions from pharynx and trachea before returning patient to room.

Medical Arts Building.

Children Born with Syphilis Respond Well To Penicillin Treatment.

In a study of 61 children, two Atlanta physicians have found that penicillin is effective in the treatment of congenital syphilis.

Congenital syphilis—a term usually associated with children who are born with the disease—is transmitted to an embryo while it is still in the womb. The infected mother's blood carries the corkscrew-like spirochetes to the infant's body. Many or all of the embryonic organs are affected.

Drs. Joseph Yampolsky and Albert Heyman, who are from the Departments of Pediatrics and Medicine of Grady Memorial Hospital and Emory University School of Medicine in Atlanta, used penicillin to treat the 61 syphilitic children, according to the October 19 issue of *The Journal of the American Medical Association.*

Thirty-two of the 61 children had simple infantile congenital syphilis. Twenty-three of the 32 responded satisfactorily under the penicillin treatment. "All 23 are clinically well, have normal spinal fluids and exhibit no clinical evidence of the disease," the authors say.

While three of the patients died, the authors believe that the fatalities were in no way related to the treatment. Two of the deaths "apparently resulted from an overwhelming syphilitic infection in premature and malnourished infants, while the third fatality remains unexplained."

In discussing the remaining 29 patients, the Atlanta doctors say that seven were suffering from acquired primary and secondary syphilis, while the others were treated for late forms of congenital syphilis.

In the seven cases of acquired syphilis, the doctors say the patients were treated with doses of penicillin comparable to those used in adults. "The syphilitic lesions healed promptly in every case and the spirochetes disappeared rapidly," *The Journal* article says, adding: "All of these children have been followed for at least six months.

"The results obtained with penicillin in the treatment of syphilis in children seem to depend on the nature and duration of the disease. Although penicillin appears to be effective in the treatment of infantile congenital syphilis and in early neurosyphilis, little or no response can be expected in the treatment of the late manifestations of this disease."

Drs. Yampolsky and Heyman say that while the optimum dosage of penicillin cannot be determined in such a small series of cases, "we believe that a total dose of penicillin of 100,000 units per kilogram of body weight is effective in the treatment of the majority of these cases."

THE TREATMENT OF VINCENT'S ANGINA WITH PENICILLIN†

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I. Introduction: The purpose of this paper is to compare the therapeutic value of various types of treatment for Vincent's angina (Vincent's infection of the tonsils) with particular regard to obtaining a satisfactory method for the treatment of ambulatory patients. The chief point stressed is the length of time required to affect a symptomatic and clinical cure. In view of its doubtful or extremely low communicability Vincent's angina may be treated on an outpatient basis. Relatively few individuals with other forms of Vincent's infection, such as stomatitis and gingivitis, are hospitalized but are treated entirely as outpatients in the various dental clinics.

None of the drugs used in the past have been uniformly satisfactory. These drugs include chromic acid, nascent oxygen-liberators, such as sodium perborate and hydrogen peroxide, and the arsenicals. Adjuvant therapy has included the oral administration of nicotinic acid.

The use of sulfonamides provided a marked improvement in the therapy of this disease. The chief disadvantage of the sulfonamides is their toxicity. When sulfonamides are employed, the transition from Vincent's angina to agranulocytic angina may be insidious and is always a potential hazard. The detection of this malignant change requires repeated blood counts. An additional disadvantage is the possibility of inducing a sulfonamide sensitization which would preclude the use of sulfonamides in the treatment of future illnesses of a more serious nature.

Penicillin with its apparent lack of significant toxicity appears to fulfill the necessary prerequisites of providing a safe, effective drug for the ambulatory treatment of Vincent's angina for both military and civilian patients.

II. Clinical Material: A total of 42 hospitalized patients were studied with particular reference to the rapidity with which therapeutic results were obtained by the use of various methods of treatment (see Table I).

Fourteen patients were treated with penicillin pastilles compounded in the hospital pharmacy, ten patients with arsenicals, nine patients with sulfonamides and nine patients with penicillin lozenges.‡

The therapeutic regimen employed for each of the several drugs mentioned was as follows:

(1) Penicillin pastille therapy: The patients were given penicillin pastilles with instructions to keep a pastille in his mouth continuously from 9:00 A. M. to 9:00 P. M. (usually requiring 24 pastilles daily). They were not allowed to use any gargles or mouth wash. Each pastille lasted approximately ½ hour. A half day's supply of pastilles was kept on the bedside table and replenished as needed. Unused pastilles were stored in the ward refrigerator. The formula for the pastilles is as follows:

Syrup	60.
Dist. Water	60.
Gelatin	28.
Sodium Penicillin	200,000 units

This amount made 100 pastilles, so that each pastille contained 2,000 units of sodium penicillin. An average of two days' treatment was required to affect a cure.

(2) Arsenical therapy: The patients were given 2 intravenous injections of either mapharsen or neoarsphenamine on alternate days. The initial dose of either drug was gm. 0.04 and the following dose was gm. 0.06.

Intravenous therapy was frequently combined with local arsenical therapy in which a 5 per cent neoarsphenamine-glycerine suspension was applied to the affected area twice daily. Some of the patients were treated with local arsenical therapy only. Three to fourteen days of local treatment were required in addition to the intravenous arsenical therapy.

(3) Sulfonamide therapy: The patients were given gm. 0.5 of either sulfadiazine or sulfathiazole every 2 hours to be dissolved on the tongue from 9:00 A. M. to 9:00 P. M. At 9:00 P. M. they were

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‡Supplied by Department of Medical Research, Winthrop Chemical Company.

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TABLE I

Case	Age	Race	Location of Lesion	Severity of Infection	Pre-Treatment Smear	Treatment	Symptomatic Improvement	Clinical Recovery	Total Days Hospitalized	Post-Treatment Smear
1	35	W	right tonsil	severe	+	Mapharsen I.V.	1 day	5 days	9 days	Not done
2	24	W	right tonsil	moderate	+	Neoarsphen I.V.	2 days	8 days	10 days	Not done
3	19	W	right and left tonsil	moderate	+	Neoarsphen	2 days	5 days	6 days	Not done
4	24	W	left tonsil	moderate	+	Neoarsphen I.V.	7 days	7 days	15 days	Not done
5	32	W	left tonsil	moderate	+	Mapharsen I.V.	2 days	3 days	5 days	Not done
6	27	W	right and left tonsil	moderate	+	Mapharsen I.V.	6 days	6 days	9 days	Not done
7	30	W	left tonsil	moderate	+	Mapharsen I.V.	3 days	4 days	5 days	Not done
8	25	W	left tonsil	severe	+	Mapharsen I.V. Local application 5% neoarsphenamine in glycerin	6 days	14 days	15 days	Not done
9	26	W	tonsils bilateral	severe	Neg.	5% neoarsphen in glycerin locally	2 days	4 days	5 days	Not done
10	20	W	left tonsil	severe	+	5% neoarsphen in glycerin locally	3 days	4 days	5 days	Not done
11	26	W	tonsils bilateral	severe	+	Sulfadiazine	3 days	5 days	11 days	Not done
12	30	W	tonsils bilateral	severe	+	Sulfadiazine	3 days	6 days	7 days	Not done
13	20	W	left tonsil	severe	+	Sulfathiazole	2 days	3 days	6 days	Not done
14	25	W	left tonsil	severe	+	Sulfathiazole	2 days	3 days	6 days	Not done

15	21	W	tonsils bilateral	moderate	+	Sulfathiazole	2 days	3 days	5 days	Not done
16	20	W	tonsil right	moderate	+	Sulfathiazole	2 days	5 days	6 days	Not done
17	33	W	tonsil left	severe	+	Sulfathiazole	2 days	3 days	5 days	Not done
18	26	W	tonsil right	moderate	+	Sulfathiazole	2 days	4 days	6 days	Not done
19	21	W	tonsils bilateral	severe	+	Sulfathiazole	3 days	4 days	4 days	Not done
20	23	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	3 days	Not done
21	23	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Not done
22	37	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Not done
23	29	W	tonsil right	moderate	+	Penicillin Pastilles	1 day	4 days	5 days	Not done
24	22	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	3 days	Negative
25	35	W	tonsils bilateral	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Negative 2nd day
26	25	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	3 days	4 days	Negative 2nd day
27	27	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Negative 2nd day
28	23	W	tonsil left	moderate	+	Penicillin Pastilles	Less than 24 hours	1 day	3 days	Negative 2nd day
29	20	W	tonsil right	moderate	+	Penicillin Pastilles	12 hours	2 days	5 days	Negative 2nd day
30	25	W	tonsil right	moderate	+	Penicillin Pastilles	12 hours	2 days	7 days	Negative 2nd day

TABLE I—CONTINUED

Case	Age	Race	Location of Lesion	Severity of Infection	Pre-Treatment Smear	Treatment	Symptomatic Improvement	Clinical Recovery	Total Days Hospitalized	Post-Treatment Smear
31	20	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	2 days	4 days	Negative 2nd day
32	37	W	tonsil left	moderate	+	Penicillin Pastilles	1 day	3 days	4 days	Negative 2nd day
33	33	W	tonsil right	mild	+	Penicillin Pastilles	1 day	2 days	3 days	Negative 2nd day
34	29	W	tonsil left	moderate	+	Penicillin Lozenges	1 day	2 days	4 days	Negative 2nd day
35	42	W	tonsil left	moderate	+	Penicillin Lozenges	1 day	2 days	3 days	Negative 2nd day
36	26	W	tonsil left	moderate	+	Penicillin Lozenges	12 days	2 days	4 days	Negative 2nd day
37	25	W	tonsil right	moderate	+	Penicillin Lozenges	24 hours	2 days	4 days	Negative 4 hrs. 6 hrs. 8 hrs.
38	19	W	tonsil left	mild	+	Penicillin Lozenges	1 day	2 days	5 days	Negative 24 hours
39	30	W	tonsil right	moderate	+	Penicillin Lozenges	1 day	2 days	5 days	Negative 3 days
40	25	W	tonsil right	moderate	+	Penicillin Lozenges	2 days	2 days	5 days	Negative 36 hours
41	24	W	tonsil right	severe	+	Penicillin Lozenges	1 day	3 days	5 days	Negative 22 hours
42	23	W	tonsil right	severe	+	Penicillin Lozenges	12 hours	4 days	5 days	Negative 4th day

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given an oral dose of gm. 4 to be swallowed and no further medication was given during the night. The course of therapy was reinstituted the following day. Sodium bicarbonate in the dose of gm. 4 q.i.d. was given concurrently to achieve alkalinization. No mouth wash or gargles were used. Two to three days' treatment was required to affect a cure.

(4) Penicillin lozenges therapy: The same regimen was followed as for penicillin pastilles. Each lozenge lasted approximately ½ to ¾ hour before completely dissolving in the mouth. A lozenge contained 1,000 units of calcium penicillin. An average of two days of treatment was required.

The results are listed in Table I. The following terms are defined:

A. Symptomatic cure: The relief of symptoms sufficient to enable the patient to return to full duty status.

B. Clinical cure: Practically complete subsidence of signs of inflammation and necrosis. The residual membrane which could easily be removed from the tonsil did not reform. The tonsillar smear was negative.

C. Total hospitalization: The discrepancy in the number of days shown in the columns "Symptomatic Improvement" (Table I) and "Total Days Hospitalized" is significant. This interval represents time consumed with administrative details, including admission and disposition, and would not occur if the patients had been treated as out-patients.

III. Conclusions: (1) Penicillin pastilles or lozenges produce symptomatic relief in 12-48 hours in patients with Vincent's angina.

(2) Twenty-three patients with Vincent's angina were treated with penicillin in the form of pastilles or lozenges without a relapse.

(3) The results obtained in this study indicate that penicillin in the form of lozenges is a drug well suited to the ambulatory treatment of Vincent's angina.

Allergy Drug Presents Serious Industrial Hazard—Drowsiness.

Two Rochester, N. Y., doctors warn that benadryl, a very effective drug for allergic skin diseases, is dangerous to persons operating any kind of machine, especially an automobile, because it may produce drowsiness, according to an article in the September 28 issue of *The Journal of the American Medical Association.*

Benjamin J. Slater, Associate Medical Director, Eastman Kodak Co., and Nathan Francis, of the Medical Department of the Eastman Kodak Co., in Rochester, state that "because of this narcotic side reaction incident to the taking of benadryl, the drug may be a serious hazard when used by persons operating automobiles or in industry operating moving equipment or machinery."

In their series of 65 cases, the authors point out that drowsiness was a common symptom in 25. "This figure should be increased somewhat," they say, "as many of our patients were instructed to take the drug only at bedtime. Invariably they reported that they slept better than usual. Drowsiness may occur from one to three hours after taking benadryl, and this drowsiness may be cumulative if the drug is continued."

A case report of one of their patients serves to illustrate how dangerous the effect of the drug may prove. A 20 year old man was given a 50 milligram capsule of this drug to relieve severe symptoms of hay fever. The second day of treatment he took the capsule just before going to work. He complained of feeling drowsy. An hour later, while driving an electric platform cargo truck, he lost control of the truck and it fell off the platform. Fortunately, he jumped in time to avoid injury.

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TRAUMATIC PERFORATION OF THE EAR DRUMS*

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During the past few years those physicians who have been in the Armed Forces have had the opportunity of observing many men with rupture of the ear drums, under varied circumstances and conditions. It is my intention to present some of the observations made of this type of injury in hopes that they may be of some interest and value in civil practice. The remarks are confined to a group of fifty-odd individuals, consecutively seen, suffering injuries to the membrana tympani, secondary to the effects of exposure to high explosives, e. g., shell, bomb, and mine blast. The injuries were sustained during the winter months of December, January, and February, 1944 and 1945, on the continent, and first came under my observation from approximately forty-eight hours to ten days after injury, depending upon the existing evacuation policy at the time. They were kept under observation for approximately thirty to forty days. Many of the individuals had suffered other traumatic injuries, and nearly all had experienced some degree of cerebral concussion.

MATERIAL. Although many more injuries to the ear drums were seen, records have been kept on fifty-eight patients. The right drum was perforated in forty-three and the left in forty-four. Twenty-nine had bilateral injuries, giving a total of eighty-seven injured membranes. The large majority of the patients were in the Ground Forces.

SIGNS AND SYMPTOMS. The drum membrane in its lower segment was invariably the part that suffered. The perforations varied from small, radial, slit-like or oval tears to large, ragged defects involving two-thirds of the membrane. It could not be determined with any degree of accuracy whether the tear was sustained during the positive or negative phase of the blast. Multiple perforations were noted in three or four cases. Hemorrhage was minimal. Actual hemorrhage into the middle ear was rarely seen. A few small clots of blood were usually present in the canal or on the drum, adjacent to the perforation. Some of the men gave a history of having slight bleeding from the canal immediately after the injury. If infection had intervened, then exudate was noted in the canal.

Pain was never a major complaint at the time of the injury or afterwards. In fact, no history of pain at the time of the injury could ever be obtained, which may be explained in part by the concurrent cerebral concussion. It was difficult to dissociate the ear symptoms from those attributed to cerebral concussion. Vertigo, like pain, was never a prominent symptom or sign. Deafness, tinnitus, and a sensation of fullness in the head were most troublesome and invariably present. Tinnitus was the most persistent and troublesome of all the complaints, with the exception of deafness. Acoustic hyperaesthesia was sometimes present late in the recovery period. Disorganization of the ossicular chain was noted in a few severely injured cases.

COMPLICATIONS. Deafness was, of course, the most common complication. No audiometer was available. Hearing was determined by the whispered voice test, as prescribed by the Army, and by tuning forks. The deafness was predominantly of the conductive type, and was apparently due to damage by air pressure rather than by noise. Mixed or combination cases were seen, however, and a few definitely had acoustic trauma with perceptive deafness. Except in the extreme cases, no relation could be determined between the size of the perforation and the degree of deafness. The presence of infection decreased the hearing acuity, as expected.

SUPPURATIVE OTITIS MEDIA. In considering infection of the middle ear, several factors had to be evaluated. For instance, in the majority of those having other wounds, sulfadiazine or/and penicillin therapy had been initiated shortly after the injury. This undoubtedly prevented infection in some cases. In other instances drops were instilled in the ears and the ears were irrigated prior to examination by an otologist. This in turn was responsible for some middle ear infections. In the group there was a total of 26 ears developing a suppurative otitis media. Culture disclosed the usual flora of bacteria, mainly the hemolytic and non-hemolytic varieties of staphylococci and streptococci. Treatment consisted of daily cleansing of the ear, using

*Read before the Virginia Society of Ophthalmology and Oto-Laryngology at Roanoke, May 4, 1946.

spot suction, followed by the instillation of sulfathiazole powder, plus the administration of sulfadiazine and/or penicillin orally and intramuscularly. The infection very promptly cleared up in all but two of the cases.

COMMENT. Of the fifty-eight patients under observation, all but six were ready for some type of duty after about thirty days of treatment. Twenty-seven were able to return to full duty, meaning that hearing had returned to normal or near normal, that the perforations had healed, and infection, if present, had cleared up. Twenty-four cases were recommended for limited assignment, either because of the persistence of a perforation after thirty days or because the hearing had not returned to the degree to fulfill the requirements for full duty, according to Army regulations. Of this latter group, fifteen had unilateral perforations, seven bilateral perforations, and two had defective hearing to a degree that precluded full service. Two patients were evacuated to rear hospitals because of severe deafness which was of the perceptive, acoustic trauma type. These were not able to qualify for any type of duty. Five cases were evacuated on account of suppurative otitis media which had not responded to any type of non-surgical therapy. It was felt that surgery should be considered in these cases, and the time limit did not permit such being done in the hospital in which they were under observation. Tinnitus, which was nearly 100 per cent present, improved greatly in the majority of cases, but still troubled some of the patients to a minor degree at the time of disposition. No patient was evacuated to a more remote echelon because of tinnitus.

As to the number of permanent perforations that will result in this group, it is impossible to say, because at the time of return to limited assignment it was felt that there was still likelihood that some of the perforations would eventually heal. Twenty-nine persistent perforations in twenty-two patients were still present after the observation period. These were in the membranes which had sustained the more extensive injuries. Cauterization with silver nitrate, to stimulate the edges of the perforations, was tried in some of the cases with indifferent success. Cargile membranes were not used. It was interesting to note that in two patients who had perforations which had reached a static phase, the perforations healed completely after the development of a secondary suppurative otitis media. The infection was the stimulating factor needed to obtain complete closure of the drum.

From observations of patients not in this group, those soldiers who had had suppurative otitis media as a complication of blast perforation, with recovery, were prone to have recurrence of the otitis media under unfavorable conditions such as adverse climate, severe coryza, etc.

SUMMARY. Fifty-eight service men, who had received perforations of the ear drums from the blast action of high explosives, were observed in a General Army Hospital. Within a period of thirty to forty days, twenty-five recovered to the degree that they could be returned to full military duty, and twenty-six to a limited assignment. It was necessary to evacuate seven to a rear echelon hospital for further treatment and disposition.

104 East Market Street.

Preservation of Corneal Tissue.

Corneal tissue cannot be preserved longer than three days before transplantation a Cleveland physician has found after experimenting with six different preservative mediums, according to the current issue of the *Archives of Ophthalmology,* published by the American Medical Association.

The author—Charles I. Thomas, M.D., from the Department of Surgery, Division of Ophthalmology, Western Reserve University School of Medicine—used the eyes of rabbits for his experiment.

"Corneal tissue will remain clear and of normal thickness and can be used suitably for transplantation up to a period of three days," he states. "Thereafter the tissue becomes progressively hazy and thickened, being thus rendered unsuitable for grafting."

In order to obtain the best operative results in corneal transplantation, the author maintains that the material should be fresh and used shortly after it is removed from the donor. The Eye Bank for Sight Restoration, since its organization, has facilitated this rapid distribution.

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POLIOMYELITIS

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This paper is based on a study of 231 outbreaks of poliomyelitis as reported in *Public Health Reports* for the years 1927 to 1940, inclusive. These outbreaks occurred in forty-four states and were reported to the Surgeon-General of the U. S. Public Health Service by the health officers of these states. Prior to 1927 the reports were recorded in such a manner as to make impossible a statistical study such as this. The data for this paper were compiled in 1941, since which time the reports for five additional years have been recorded in the *Public Health Reports*. A detailed study of these has not been made but a casual review shows nothing at variance with the findings of this fourteen year study.

Only those outbreaks attaining a height of ten cases per week are here considered. There were many more of a minor nature but these were more difficult to follow in the recorded statistics and were ignored. Three states and the District of Columbia did not show outbreaks attaining a height of ten cases per week during the fourteen years here studied. One state made no reports to the Surgeon-General.

This paper is concerned principally with the chronology of these outbreaks as related to their geographic location in the United States. The nation-wide distribution of the disease needs no comment and its incidence in the different states is a matter of record.

A figure of ten cases per week means a higher rate in the more sparsely settled states, but that height having been reached the chronology is comparable.

In this study outbreaks were considered to have begun only when they had attained a height of ten cases per week and to have ended when the last week of ten cases had been reported in the waning of the disease. The actual beginnings and endings ante-dated and post-dated these arbitrary dates by several weeks only in all but a minimum of cases.

Of the 231 outbreaks, 58 attained a height of ten cases or more for only one or two weeks. These are of value chiefly as showing peaks of incidence. The remainder, 173, continued at or above this figure for from three to thirty weeks.

Before considering the outbreaks in detail, a brief summary of the figures upon which they are based and the general seasonal incidence of the disease during the fourteen years, is given. There were 34,944 weekly reports made in this period and the total number of cases of poliomyelitis recorded was 100,720. The greatest number of cases reported in any one year was 15,438 in 1931. The smallest annual record of cases was 1,710 in 1938.

89 per cent of these cases were reported in the last six months of the years—July to December, inclusive;
11 per cent were recorded in the first six months;
69 per cent were recorded in the months of August, September, and October;
3.3 per cent in the months of February, March and April;
24 per cent were recorded in the month of September;
0.9 per cent in the month of April.

Other facts gleaned in this study tended to maintain the known seasonal characteristics of the disease. There were a total of 2,074 weeks of ten or more cases, thus making the average duration of the 231 outbreaks almost nine weeks at a level of ten or more cases per week. Eighty-three weeks of ten cases were in the period January 1st to June 30th. All others, 1,991, were recorded between July 1st and December 31st. Of the eighty-three weeks in the first half of the year, seventy-seven were in the southern states and in California and Washington. Six only were in northern states other than Washington—New York, Oregon, Illinois and Wisconsin.

The latest week of ten cases reported in any declining epidemic was that of March 10 in a California outbreak which had persisted at this or a higher figure from the preceding year. This was the only week of ten cases reported in any March during the fourteen years. Likewise, the only week of ten cases in any *April* was the first such week in a beginning outbreak in this same state in another year. The warmest month of the year in all sections of the United States, July, proved to be fifth in the number of cases recorded during the fourteen years, having been exceeded by August, September, October and, to a slight degree, even by November.

Of the recorded outbreaks, fifty-four were in fourteen "Southern" states or states along the southern

border. The remainder (177) were in northern states—those entirely or largely north of the 38th parallel of latitude.

The peaks of incidence in southern states occurred in all months from June to November; in northern states from August to November, with one exception to be noted later. Sixteen, or nearly one-third of the outbreaks in southern states, showed peaks of incidence in June or July—California, North Carolina and South Carolina in June; Virginia, Kentucky, Tennessee, Georgia, Alabama, Mississippi, Louisiana, Arkansas, Oklahoma, and New Mexico in July.

Of the outbreaks in northern states (177) only one presented a high point prior to August. This was in the state of Washington in 1940. The peak here was in June. Including this Washington outbreak there were only five in northern states with peaks of incidence prior to August 15th. All others were later, for the most part in September. Of interest is this early outbreak in the northern state of Washington. Reference to the U. S. Weather Bureau's climatologic data for this state for 1940 shows that the mean temperature for the months of March, April and May in the town of Ephrata, near the center of the state, was slightly higher than the mean temperature in Charlotte, North Carolina, for the same months. This would place the state of Washington among the southern states climatologically, at least for the year 1940.

The latest peak of incidence recorded was in the early half of November in Oklahoma in 1936.

Of the beginnings of these outbreaks, California alone showed a week of ten cases as early as the last week of April. North Carolina, South Carolina and Washington (state) had outbreaks beginning in May. Virginia, Mississippi, Louisiana and New York in June. All others began subsequent to July 1st. The only one of the 177 outbreaks in northern states other than Washington, showing a beginning as early as June was the epidemic in New York State in 1931 when a first week of ten cases was reported for the week ending June 22nd of that year.

As before stated, the actual beginning of outbreaks ante-dated by only a few weeks the time at which a height of ten cases per week was attained. This was so in the very great majority of cases. There were, however, several interesting exceptions. One was an outbreak in South Carolina that began in the fall of 1938 and continued throughout the winter at a level below ten cases per week. Beginning with the week ending May 6, 1939, there was a sharp rise in cases to ten or more per week, at which level the outbreak continued until October. A high point of thirty cases was reached in the week ending June 24. A like condition was noted in Arkansas, Oklahoma and Texas in the fall of 1936, with a very low incidence during the winter and spring. Sharp outbreaks appeared in June, 1937, and lasted into November. It is probable that these three actually comprised one outbreak in contiguous territory, although the record does not so state. Here the disease was apparent throughout the winter and early spring. Usually it is not evident in February, March and April. These four instances are all in southern areas; none were noted in northern states.

Of the termination of these outbreaks, it was found that forty-nine of the fifty-four in southern states had declined to a point below ten cases per week prior to November 1st. Of the entire 231, only 25 maintained a height of ten cases later than November 30th. Of these twenty-five, only seven showed as many as ten cases per week later than December 31st. Three of the seven were California outbreaks which carried sixteen ten-case weeks into January, February and March (one only into March). The other four, in the states of New York, Illinois, Oregon and Wisconsin, carried four weeks of ten cases into January and one (New York) into February.

That poliomyelitis is in large measure a disease of warm weather has been obvious for many years. This study brings out an even closer relation between the disease and seasonal temperatures than may have been generally recognized. Here it is seen that an interval of from six to eight weeks separates the beginnings of outbreaks in states of the south, or the warmer states, and those of the north. Specifically, it has been here shown that outbreaks began in southern and border states and in the state of Washington as follows: California the last week in April; North Carolina, South Carolina and Washington the second week of May; Virginia, Mississippi and Louisiana in early June. It is also here shown that New York alone of the populous states of the northeast and middle-west reported a week of ten cases earlier than July 1st (June 22, 1931). Otherwise none of the 177

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outbreaks of poliomyelitis in northern states attained a height of ten cases per week until some time in July. This early start of poliomyelitis in warmer areas is reflected in the earlier peaks of incidence in outbreaks. In thirteen southern states and the state of Washington there were sixteen outbreaks which showed high points in the disease in the months of June and July in the fourteen years here considered. No state north of parallel 38, except Washington, presented a peak of incidence in these months—and only four in the first half of August.

Apparently, poliomyelitis can begin in any of the warmer states at any time from late April on, while in the northern states with their somewhat "later season" the disease seems unable to make a beginning until, at the earliest, late June.

There is, in this six to eight weeks' difference, a striking resemblance to conditions found to prevail in yellow fever as relates to the beginnings of that disease in areas south of and north of the 38° parallel of latitude. As yellow fever has not appeared in the United States since 1905, there are no recorded statistics of epidemics of that disease to compare with those of poliomyelitis as set forth in this paper. However, the U. S. Quarantine Regulations which prescribe the treatment of vessels arriving in the United States from foreign ports infected with yellow fever very definitely set forth this difference in time of infectibility as between southern and northern areas. To quote from these regulations as to the detention of vessels: "Quarantine detention is imposed upon vessels arriving at United States ports from ports infected, or suspected of infection with yellow fever, as follows": First, "arriving at a port south of the southern boundary of Virginia in the season of active quarantine, *April 1st* to November 1st." Second, "arriving at ports north of this line and south of the southern boundary of Maryland (38th parallel of latitude) between *May 15th* and October 1st." Here is recognized a difference of six weeks—April 1st to May 15th between Virginia and points south of that state to the Gulf of Mexico as to possible early infection.

Yellow fever not having been present in the United States north of the southern boundary of Maryland during the past century, it was not necessary in writing the Quarantine Regulations to consider a later period of quarantine detention in states north of Virginia. Had it been, this detention period would probably have begun June 1st. This six or eight weeks' difference in time of possible early infection with yellow fever as between northern and southern areas of the United States is duplicated in poliomyelitis. In yellow fever, the determining factor is the time of development of the transmitting mosquito—earlier the farther south or warmer the area. The reason for the earlier development of poliomyelitis in the warmer states is not clear at this time. Insect transmission is strongly intimated and this intimation is enhanced by the outbreak in the state of Washington in 1940. Just here it may be noted that the mean annual temperature in Fresno, California, near the center of that state, corresponds closely to that of Birmingham, Alabama. More southerly areas of California would correspond in mean annual temperatures to areas along the Gulf of Mexico. It was in California that the earliest week of ten cases in a beginning outbreak of poliomyelitis was noted—the week of April 25th. The actual start of this outbreak was no doubt about April 1st, which is the earliest period set by the U. S. Quarantine Regulations for the possible start of an epidemic of yellow fever in the far south—the earliest period for the possible appearance in dangerous numbers of the insect vector of that disease. If there is any factor other than insect transmission involved in the progression of diseases from south to north in accordance with the progressive advance of the warm weather of spring and early summer it has not been observed. In the so-called contagious diseases and in those due to foods directly infected by man this factor is unknown. That *high* temperature alone is not the determining factor should be obvious when it is seen that November exceeds July in number of cases of poliomyelitis recorded over this period here studied.

The striking similarity seen in the beginning of epidemics of yellow fever and poliomyelitis is definitely absent when the termination of these diseases is considered. Yellow fever cannot continue to develop anywhere in the United States after November 1st, as the transmitting mosquito has then disappeared, at least to an "innocuous minimum". But twenty-five of the 231 outbreaks of poliomyelitis continued into December at or slightly above a level of ten cases per week and four of these in four *northern* states showed a total of five weeks of ten cases in January and February (one week in February).

To a lesser and continuously decreasing degree poliomyelitis persisted throughout the winter and early spring. The bridge upon which the disease crossed from one season to another was a very narrow one when less than two cases per month per state were recorded in the months of February, March and April in this period of fourteen years.

These recorded winter cases, together with some peaks of incidence of the disease in November, seem definitely to rule out a summer insect as a direct factor in the termination of outbreaks of poliomyelitis, however strong may be the suggestion of such an insect in their origins.

A complete understanding of the factors that make possible the similarities and differences in yellow fever and poliomyelitis as regards the beginning and termination of outbreaks would lead undoubtedly to an untangling of the intricate epidemiologic web presented by the latter disease.

In a problem so complicated and so fraught with dire results due to delay in its solution, one should be pardoned for venturing to suggest a possible line of study based upon the chronological findings set forth above.

The impressions left upon the mind of the writer are: that the virus of poliomyelitis must, primarily, be resident in some animal that is associated with man, preferably one which furnishes some article of food; that in this animal the virus must be harmless or relatively so; that the virus is transmitted from animal to animal by the bite of an insect; that outbreaks of poliomyelitis in man are overflows of the infection from animals, as human plague is an overflow from primarily infected rats, and that man contracts poliomyelitis through the use of the animal or its products as food. Such a double transfer of disease is seen in tularemia and could be seen also in brucellosis were this disease transmitted in cattle —as well it might be—by the bites of flies.

Enlarging somewhat upon this suggestion, it may be that the insect here predicated develops earlier, as does the mosquito,: in the warmer areas of the United States and that it is active in the same period as the mosquito. Upon the beginning disappearance of the insect in the fall, there would be a decline in new human cases corresponding to a disappearing infestation in the animal involved. This decline would continue until there remained in early winter only those cases which resulted from the use of food from the more chronic cases of animal infestation. The few winter cases would be related to the few animals that could then be classed as carriers. These carriers would serve also as vehicles for transferring the virus of poliomyelitis to another season and to a new, nearby, non-immune animal area (an adjoining state, perhaps).

A study of the fluids and tissues of animals furnishing food to man in any area where poliomyelitis may be approaching epidemic proportions would seem definitely in order. A study of such insects as might feed upon these animals might also be made, as is done in the case of the flea in bubonic plague. The matter of gathering and pooling such material for use in laboratory animals susceptible to poliomyelitis should not be beyond the scope of those who devote themselves to the study of this disease.

Question Usefulness of Quarantine.

Usefulness of quarantines established by some states to prevent the spread of poliomyelitis is held "highly questionable" by *The Journal of the American Medical Association.* In the July 27 issue, *The Journal* says in an editorial.

"This year, as in previous years, some sections of the country have developed an exceptionally high incidence of poliomyelitis. A few cities in southern Florida were involved in this manner. One of the neighboring states considered the establishment of a quarantine against Florida residents. Georgia actually imposed such a quarantine against all persons coming from the former state, even including Pensacola, which is 402 miles from the nearest city in which there has been an outbreak of poliomyelitis that could possibly be considered as epidemic in nature. The usefulness of this interstate quarantine is highly questionable. The overwhelming concensus of authorities in epidemiology and public health is that such interstate quarantine does not serve any useful purpose in preventing the spread of poliomyelitis. In the absence of more specific knowledge on the methods of spread of the poliomyelitis virus than is now available, state quarantine can only be considered reminiscent of the old practice of shot-gun quarantine against yellow fever before learning the role of the yellow fever bearing mosquito."

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CRITICAL REVIEW OF FIFTY CASES OF URTICARIA

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The last comprehensive studies of urticaria and angio-neurotic edema were published eleven years ago. Stokes, Kulcher and Pillsbury[1] reviewed in 1935 the literature on urticaria and reported 100 cases. Fink and Gay[2] based their studies, which they published in 1934, on 170 cases.

A considerable number of papers for the past 10 years dealt with new therapeutic approaches of urticaria or tried to bring out the respective author's belief that, based on the successful treatment of a number of patients, one particular etiologic factor was of decisive importance. This study of 50 cases of urticaria was mostly made with the intention to determine to what extent the therapy of urticaria can be successful if the known etiologic investigations and therapeutic measures are utilized.

Twenty of the cases were treated at the clinic and thirty were private patients.* All patients were seen within the past six years and most of them were followed up to date.

CLINICAL DATA

Sex: There was a preponderance of female patients, 30 females and 20 males. Such a ratio of 3 to 2 has been commonly observed in almost all publications. From the statistics of the 500 cases, which Urbach[3] reported, it can be concluded that the females make up this majority in the 3rd, 4th and 5th decades (5:3 ratio) while the males are preponderant in the 1st decade. The 2nd and 6th decades are almost evenly divided as to sex. If the etiologic factors are consulted for an explanation of the preponderance of urticaria in female patients, it can be said that two factors, namely, the endocrine and psychogenic, could account for this phenomenon, since they are more frequently encountered in this sex.

Ages: The ages varied from 3 to 59 years. The greatest number of patients was in the 3rd and 4th decades. These 2 decades comprised half of the patients. Urbach found in his greater number of cases that 7/12 of the patients belonged to these two decades.

*The cases were from the Clinic of the Medical College of Virginia and the practice of Dr. Wyndham B. Blanton.

Ages of patients at onset of treatment:	0–10	Years	5 Patients
	10–20	"	8 "
	20–30	"	12 "
	30–40	"	13 "
	40–50	"	9 "
	50–60	"	3 "

If the ages are considered in which the first attacks of urticaria appeared, only the numbers in the first two and last two decades are changed. The increase in the first two equals to decrease in the last two decades.

Ages at onset of first symptoms:	0–10	Years	8 Patients
	10–20	"	9 "
	20–30	"	14 "
	30–40	"	12 "
	40–50	"	6 "
	50–60	"	1 "

Duration: The duration of the urticaria until the patients came under observation varied from 2 days to 6 years. The majority of the patients (41) had the chronic type with a duration of symptoms for more than 2 months. Thirteen patients reported previous attacks. The comparatively small number of acute cases is obviously due to the fact that patients with transient and acute attacks of urticaria do not always seek medical advice and only rarely consult an allergy clinic or an allergist.

Season: As far as the seasonal distribution is concerned, the greatest number of exacerbations and onsets of symptoms were reported in the summer. Twelve patients stated that they did not notice any seasonal influence. Sixteen patients gave the summer as the time in which their symptoms were at first observed or an aggravation of a chronic condition was noticed, 5 gave the fall, 11 the winter and 6 the spring. Fink and Gay found that the peak of onsets in their cases was in January, which they interpreted to be a result of the larger number of respiratory infections at that time of the year. Among our series of cases infections were not as commonly found as an etiologic factor as in Fink and Gay's series, which would explain the difference in the seasonal distribution.

Symptomatology: The symptoms exhibited by the patients were of the usual character. The lesions consisted of wheals in 39 patients, giant urticaria

in 9 and the papular type in 2. Seven patients had in addition to wheals giant urticaria.

Thirty-two patients had generalized urticaria, 8 of whom noticed at first a localization of the wheals mostly in the areas of pressure. Eighteen patients had localized urticaria (face, extremities, neck).

The mucous membranes of the mouth were involved in 3 patients. Baird[4] pointed out that typical urticarial wheals have been demonstrated in the stomach by gastroscopic examination. It can, therefore, be assumed that the gastric or intestinal mucosa was involved in many of the 15 patients who gave a history of gastrointestinal symptoms which preceded their hives. These symptoms consisted of "heavy or burning feeling in the stomach", "heartburn", vomiting and diarrhea.

Laboratory findings are at times helpful in determining the etiologic factor. In none of our cases was any appreciable help for the etiology obtained from laboratory examinations. Winkenwerder[5] has observed that eosinophilia is not frequently found in urticaria. Only a relatively small number of our cases showed an eosinophilia. Blood counts were made on 31 patients and only 9 had an eosinophile count of 4 per cent or more (6 had 4 per cent, 1:6 per cent, 1:7 per cent and 1:10 per cent).

Prothrombin time was determined on 6 patients; it was prolonged only in one.

Determination of sedimentation rate was not useful as an indication of the existence of a focal infection which would be a causative factor. Only 1 out of 8 patients had a fast sedimentation rate, but no focus of infection could be found in this patient and a dietary regime resulted in a cure of the urticaria. On the other hand, 2 patients with a normal sedimentation rate did not improve until a focal infection was eliminated.

Gastric analyses were made on 6 patients; 4 gave normal findings, 1 showed a hypoacidity and 1 an anacidity. Lowered acidity and especially anacidity have repeatedly been mentioned as a predisposing factor of urticaria.

Skin Tests: Most observers agree upon the experience that skin tests are of less value in urticaria than in other allergic conditions. Baird characterizes the unreliability of skin tests by using Ormsby's statement: "Skin tests in urticaria are often positive to substances that are innocent and negative to substances that are causal." Several explanations of this observation have been suggested. The most frequently encountered explanation is that the active antigen is a split product of digestion, which we are unable to demonstrate by using the original substances in our tests. Sulzberger[6] discusses the pros and cons of this and the other theories which were offered in an attempt to explain the misleading character of the skin tests in urticaria.

Although they have seen disappointing results from skin tests, a number of authors (G. T. Brown,[7] Feinberg,[8] Vaughan,[9] Kahn,[10] Johnson[11]) have advocated this procedure as a valuable diagnostic help which should be used in most of the chronic cases. Many authors have reported cases in which the skin tests have enabled them to determine the etiologic factors. Some investigators suggested that skin tests should only be used in patients who have a history of personal or family allergy (M. Cohen,[12] Swinney[13]).

Skin tests were made on 43 of our 50 patients. Thirty-four patients gave positive reactions; 9 did not show any reactions. The highest number of positive reactions was obtained to "general excitants" (Sulzberger) like dust and feathers. Twenty-five patients gave reactions to foods, and of these only 4 agreed with the patients pre-suppositions. Five patients who were instructed to avoid foods to which they had positive reactions reported a definite improvement of their symptoms.

ETIOLOGY

The most important source of information for the determination of the etiology is the history. All authors have stressed that the patient's experience and observations should be more valued than the skin tests and laboratory findings.

An allergic history could be elicited in 23 patients. Of these cases, 11 had one and 12 had two or more members in the family with an allergic disease. The incidence of allergy in the family was about as high as it is found in asthma and hay fever; e.g., Cooke and Vander Veer[14] found in a study of 504 cases of hay fever and asthma that the family history was positive for allergy in 48 per cent.

Thirteen of our patients gave a personal history of other allergies. Some patients had 2 allergic diseases in the past. Five had bronchial asthma, 3 hay fever, 4 vasomotor rhinitis, 3 eczema, 3 gastrointestinal allergy and 2 migraine.

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Next to the constitutional factors, acute and chronic infections or toxic changes of the gastrointestinal tract are mentioned as predisposing factors. It is explained that the damage of the gastric and intestinal mucosa that results from these conditions permits the absorption of incompletely digested proteins which are responsible for the production of the urticaria. The fundamental research work, on which these findings are based, was made in France (Chevalier[15]). M. Walzer[16] contributed prominently to these observations by studying the influence of different substances on the change of the absorption rate. Fifteen of our patients gave a history of gastrointestinal disturbances which were connected with their urticaria. Two patients had their first attacks of urticaria following the ingestion of alcohol.

Specific Etiologic Factors: According to the generally accepted theoretical explanation of the whealing process in urticaria, is the cause of this phenomenon a disturbance of the function of the cutaneous blood vessels? The only way we are able, at the present time, to influence this mechanism is to prevent the disturbance by eliminating or reducing the contact with these factors which are known to provoke the change in the physiology of the cutaneous vessels. A complete list of all these factors is rather confusing. It was, therefore, of great practical value, when Fink and Gay suggested that the causative factors could be classified in 5 groups. Stokes and his co-workers called our attention to their findings that, especially in chronic cases, not one single element produces the urticaria, but a combination of different factors is more commonly to be confronted, and that the success of the therapy depends on the realization and evaluation of this "inter-play" of several components. In both publications allergy is not considered to be of prime importance for the etiology. Fink and Gay believe that infection is the most important factor. For the past decade bacterial allergy has figured prominently in the studies of respiratory allergies and has found many advocates. Recent papers on urticaria due to infection (Hansen-Pruess,[17] Traut[18]) make it justifiable to assume that bacterial sensitization can also be found in urticaria. Stokes and his co-workers thought that the psychogenic element deserved the greatest attention. The importance of this element has not been minimized in the recent literature, but it was stressed that, while the psychogenic factor is very important as a precipitating and secondary element, it should only be considered as the only culprit if all other factors have been thoroughly investigated and excluded (Winkenwerder, Feinberg).

If the experiences gained from respiratory allergies are taken into account and the recent literature on urticaria is considered, the etiologic factors can be grouped for practical purposes as follows:

A. Allergic factors:
   I. Exogenic or extrinsic
      a. Foods
      b. Drugs
      c. Contacts
      d. Inhalants
      e. Physical
   II. Endogenous or intrinsic
      a. Infections
      b. Endocrine

B. Psychogenic factors.

In all the factors, which are listed among the allergic types, an allergic reaction can be assumed and reasonably explained to be the underlying mechanism. The above list does not comprise all reported causative factors of urticaria. Sulzberger and Wolf[19] mention a number of diseases in which, apparently, the disturbances of the function of the cutaneous blood vessels cannot be explained as an allergic reaction; e.g., blood dyscrasias, malignant tumors, Hodgkin's disease. The finding of urticaria in these diseases, however, is, as the authors state, relatively rare.

Foods: In 12 of our patients, foods were found to be the causative factors. Six patients discovered the foods after they were added to their elimination diet. Six patients suspected certain foods and substantiated their pre-suppositions by repeated trials. In 4 of these patients, the skin tests corroborated the patients' experience. The following foods were found to be responsible: Citrus fruits (3), milk (2), fish (2), chocolate (2), tomato (2), strawberries (2), banana (1), wheat (1).*

In 7 other patients, the causative foods could not be definitely accounted for. Five patients, who recovered after avoiding a number of foods to which they had positive skin tests, could not verify the correctness of the tests by later trials. Two patients

*The numbers indicate how many patients found the particular food offending; some found more than one food.

recovered after they were placed on elimination diets, but were unable to detect the offending food after they returned to a normal diet.

Drugs: Four patients were definitely convinced by repeated trials that aspirin was responsible for their hives. Two of these patients had also found some foods as the cause of their urticaria.

The list of drugs, which are named in the literature as causative factors, is very long. Aspirin seems to be the most commonly mentioned drug. Fink and Gay found in their series phenolphthalein as the most frequently encountered drug. Among the newer drugs penicillin has been mentioned in several recent publications (Keefer,[20] Criep[21]).

Urticaria after injection of serum is a familiar observation. Waldbott and Asher[22] reported 4 cases in which urticaria of the serum-sickness type was brought on by ingestion, contact and infection.

It might be of interest that among our 21 patients, in whom urticaria was found to be due to foods and drugs, 14 had gastrointestinal symptoms preceding their urticarial attacks. These symptoms could be interpreted as urticaria of the gastrointestinal mucosa which would, therefore, contain the shock tissues which come in contact with the antigen at first. A similar behavior of the nasal mucosa preceding an asthmatic attack is a familiar observation. Some of the gastrointestinal symptoms could have been due to inflammatory or toxic changes of the mucosa with a consequent absorption of incompletely digested proteins. Regardless of how the gastrointestinal symptoms are interpreted, if they are elicited in the history, they might mean a helpful clue that foods or drugs are to be considered as probable etiologic factors. Only one patient, who complained of "indigestion" before his urticarial attacks occurred, did not recover after he was placed on a dietary regime. This patient was found to have a chronic cholecystitis.

Contacts: There was only one patient in our series who ascribed her urticaria to external contacts. This patient found that oxydol and rinso caused her hives. Contact allergens, which are described in the literature, usually produce urticaria also by ingestion or inhalation. Fungus infections of the skin, as shown by Wise and Sulzberger,[23] are also considered as contact allergens.

Inhalants: In none of our cases was it possible to trace the origin of the urticaria to an inhalant. Sulzberger and Vaughan[24] demonstrated reactions on passively sensitized sites after inhalation of silk. Derbes and Engelhardt[25] recently reported two cases in which the urticaria could be attributed to ragweed pollens. Twelve of our cases received environmental control instructions, which is an established procedure in difficult urticaria cases, and seven were also desensitized to dust and other inhalants. It is, however, impossible to state whether they derived a decisive benefit from these procedures since other etiologic factors were also considered in their treatment.

Physical: Two of our patients found that heat and one that cold provoked attacks of urticaria. All three patients also had attacks of urticaria which were precipitated by other factors. In two recent publications (Hopkins, Kesten, Hazel[26] and Grant, Pearson, Comeau[27]), it was shown that some types of physical urticaria have to be regarded as cholinogenic. Grant and co-workers have demonstrated that in some cases of urticaria provoked by heat and also by psychic influences, the lesions were produced by the release of acetylcholine at the termination of cutaneous nerves.

Infections: Acute infections are often mentioned as etiologic factors. All of our cases, in which infection was found to be of etiologic importance, were due to chronic infections. The following foci of infection were considered as possible sources of urticaria: Sinusitis (9), teeth (7), tonsillitis (3), pyorrhea (2), infected adenoids (1), cholecystitis (1), prostatitis (1), cervicitis (1), chronic salpingitis (2). Seven patients showed a definite improvement after the focal infection was eliminated or treated. Three patients had infected teeth removed; one of them noticed an exacerbation of his symptoms immediately following the removal of the teeth. On two patients tonsillectomies were performed. Two patients with sinusitis improved after they received injections of autogenous vaccine; they did not respond to elimination diets which were tried at first. Nine patients, in whom a chronic infection was suspected to be a causative factor, responded to a dietary regime, which shows that the finding of a focal infection does not necessarily mean that the infection has to be the causal element.

The most frequently described foci of infection that have been found to be responsible for the hives are teeth, tonsils and sinuses. Among the other foci,

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the gall-bladder was once considered to be an important source of the hives (Menagh[28]). Hansen-Pruess recently reported several cases of urticaria of bacterial origin. One of his cases was due to a chronic pyelitis and five were due to intestinal infections which were caused by beta hemolytic streptococci as the stool cultures revealed. The urticaria disappeared in his patients as soon as the infections were cured by prontylin medication. Traut reported four cases of urticaria which he treated successfully with vaccines of rectal streptococci. The allergic mechanism of urticaria due to intestinal infestation, which can be mentioned in this connection, was demonstrated by W. Jadassohn.[29]

Endocrine: Zondek and Bromberg[30] presented in a recent publication convincing evidence that "allergic reactions may be due to endogenous allergens, produced within the organism by endocrine glands." The fluctuation of the level of the steroid hormones in the body that accompanies the menstrual cycle and the hormonal changes that occur during the climacteric period and are clinically more evident in females explain it that urticaria is almost exclusively influenced by "endocrine allergy" in female patients. Three of our patients noticed that their worst attacks of urticaria were associated with menstruation. Two patients stated that their urticaria coincided with menopausal symptoms. In three of these patients, the psychogenic element was very dominant. Good results with hormone therapy of urticaria by using the estrogenic hormone were described by Davison[31] and co-workers. It is possible that the results of the hormone therapy could be improved if Zondek's technique in testing the patients to hormones would be adopted and the desensitization would be based on the outcome of the tests. Cases of urticaria due to endocrine dysfunction of the thyroid gland have been mentioned in the literature (Winkenwerder).

Psychogenic Factors: The psychogenic element is considered as one of the most important factors in the etiology. Thirteen of our patients gave a history which suggested that nervous influences had a decisive bearing on the development of their hives. Only in three patients was nervousness found to be the only responsible factor. In the other patients, the nervousness precipitated or aggravated the urticaria. Stokes and his associates have stressed that the psychogenic element is the most commonly found "component" which can be associated with any of the other etiologic elements by "broadening the base of allergic susceptibilities."

TREATMENT

The treatment followed the usual outlines of the specific therapy of urticaria. The patients were instructed to avoid all drugs. Foods which were known to cause any allergic reaction previously or which were suspected by the patient were excluded from the diet. Some patients were placed on elimination diets; some were told to avoid foods that gave positive reactions to skin tests. A careful search for focal infection was made, and if the dietary regime did not benefit the patient's condition, the treatment of the infection was initiated.

Thirty-two patients were cured or definitely improved. Twenty-one recovered after dietary treatment and avoidance of drugs. In fourteen of these patients, other factors were also taken into consideration in the treatment. Five were treated simultaneously with autogenous vaccines; six were instructed to avoid all environmental allergens or were desensitized to inhalants, and four reported an improvement of their nervous condition after rest or some readjustment. In seven patients, the removal or the treatment of the focal infection seemed to be the decisive contribution for the successful therapy, but also in these cases were other etiologic components evident, as three patients noticed that after the elimination of the focal infection, mild attacks of urticaria occurred, which two patients attributed to foods and one to emotional upsets. One patient recovered after avoiding contact allergens. One patient was relieved by estrogenic hormone therapy, and two patients recovered after a readjustment of the psychogenic factor was accomplished by rest.

Five patients did not improve. Two of these had foci of infection which were suspected as causative factors, one having chronic cholecystitis and one infected tonsils. Both patients would not accept the advice to undergo an operation for the elimination of the focus.

Thirteen patients could not be followed up. They either did not return to the clinic for further treatment or were referred to their family physicians and could not be contacted. It is to be assumed that in a number of these patients the therapeutic efforts were not successful.

The results of the specific therapy are, as most observers have indicated, only in about 60 to 80 per

cent of the reported cases successful. The reason for the failure of the specific therapy in a number of cases is mainly due to the difficulties which are encountered in the determination of the etiologic factors, and which cannot always be overcome, even if the investigation has been conducted very painstakingly and has been based on the "complete knowledge of all potential causes" (Sulzberger) and an intelligent cooperation of the patient has been assured. The literature on urticaria manifests the efforts which have been made to improve and also to simplify the therapy by finding some non-specific method of treatment. Since spontaneous remissions even in longstanding cases of hives are commonly observed, the results of these methods are considered with a great deal of skepticism. Some of the suggested methods are purely empirical; some are based on theoretical consideration.

The results of the non-specific methods which were tried on a number of our patients were generally disappointing. Some of the methods used were: Potassium-rich and salt-poor diet (Rusk and Kenamore[32]), histaminase (Laymon[33]), histamine (Smith,[34] Alexander and Elliott[35]), nicotine acid (Chambers and Bernton[36]), hapamine (Cohen and Friedman[37]). Of the drugs used, histaminase was given to several patients four years ago. It did not beneficially influence the course of the urticaria in any case. The same can be said about the new panacea, hapamine. Black[38] recently reported an impressive number of patients who benefited by vitamin K, which he thought might influence the permeability of the capillary walls. Six of our patients received vitamin K. The only patient who improved after this medication was at the same time on an elimination diet. Feinberg[39] recently reported good results in the treatment of urticaria with a new histamine antagonist (synthetic benzydryl alkamine ether).

SUMMARY

The clinical data and etiologic factors of 50 cases of urticaria are reviewed. After surveying the recent literature on urticaria in the study of the etiology, it was found that an allergic reaction of extrinsic or intrinsic origin can be assumed to be the underlying mechanism in the majority of the cases. The extrinsic factors consist of foods, drugs, contacts, inhalants and physical agents; the intrinsic, of infections and endocrine disturbances. The psychogenic element is the most important precipitating factor. A combination of several factors has to be considered in chronic cases. The specific therapy is only in about 60 to 80 per cent of the cases successful on account of the difficulties in the determination of the etiology, which is not benefited much by skin tests. The results of non-specific methods are disappointing. Two newly suggested methods are awaiting further clinical trials.

Since this paper was written, it has been confirmed repeatedly that the antihistaminic drugs (benadryl, pyribenzamine) have a beneficial, but only palliative, effect on urticaria.

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Substances Placed On Body Surface Need More Study.

Referring to cases of poisoning associated with the use of thioglycolic acid in the so-called cold wave process for permanent waving of the hair, the June 29 issue of *The Journal of the American Medical Association* says editorially that "as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as those taken into its interior before these processes are released for use to the general public."

The statement was made in connection with an article in which Carey P. McCord, M.D., of Detroit, called attention to certain facts which he believed were overlooked by Lawrence H. Cotter, M.D., of New York, in his discussion of the cold wave process in *The Journal* of June 15. Dr. McCord believes that damage to the liver by the use of cold wave chemicals has not yet been definitely shown in any instance and that allergic responses are infrequent when materials used are properly prepared.

"Not withstanding these statements," the latest issue of *The Journal* says, "the fact remains that some 50 different commercial agencies are engaged in the manufacture of materials used in cold wave processes, that there exist no definite standards as to what is safe or harmful, that experimentation before launching such products is for the most part inadequate and incomplete and that it is time for public recognition of the fact that as much careful evidence needs to be accumulated regarding the safety of substances placed on the surface of the body as those taken into its interior before these preparations are released for use to the general public."

Caution Against Use of Mineral Oil in Food.

High prices and the scarcity of edible vegetable oils have caused many restaurants to use mineral oil in food, according to the August 24 issue of *The Journal of the American Medical Association,* which warns that this practice is harmful to patrons. *The Journal* says:

Attention has been called recently to the occurrence of fecal incontinence [diarrhea] due to the ingestion of excessive quantities of mineral oil by unsuspecting patrons of restaurants where mineral oil has been substituted for edible oils in salad dressings. The Council on Foods and Nutrition called attention to the harmful effects of mineral oil in foods in the following paragraph:

> It has been shown that the ingestion of liquid petrolatum is capable of interfering seriously with the absorption of carotene, vitamin D, calcium and phosphorus and vitamin K. The effects of its prolonged use have not been thoroughly investigated, but there is sufficient evidence of possible harmful effects to justify the conclusion that its indiscriminate use in foods or in cooking is not in the interest of good nutrition, and any such use should be under careful supervision of a physician.

In reply to inquiries about the legality of mineral oil in salad dressings the Food and Drug Administration has expressed the opinion that "mineral oil salad dressings must be regarded as adulterated under the Federal Food, Drug and Cosmetic Act under any form of labeling employed." Mineral oil should certainly not be used except under the supervision of a physician familiar with the problems involved and should not be used indiscriminately in foods.

BLAST CONCUSSION—OBSERVATIONS RE: HANDLING*

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Blast injuries are fairly common, and numerous cases have been seen since onset of World War II. Unprecedented amounts of high explosives used by artillery and air forces have resulted in an unusual number of cases, presenting a syndrome which has been shown to be caused by varying degrees of injury to tissue. These injuries are due directly to the blast and concussion of high explosives expending themselves at varying distances from the patient.[1,2,8]

The detonation of high explosives produces an excessively intense longitudinal compression wave, which is grossly similar to that of a sound wave of high amplitude. The wave consists of two components or phases: a pressure and a suction component. The velocity of this wave varies between 1,500 and 7,600 meters per second. The pressure component may be as high as 200 atmospheres (1,360 kilograms, or about 3,000 pounds) per square inch; while the suction component may approximate that of a perfect vacuum.[4, 9, 11, 13, 18]

The force of a blast wave varies inversely with the distance of the blast.[3]

It should be pointed out that any particular injury may be primarily caused by either the suction or by the pressure component, or, as is usually the case, any post concussion syndrome is caused by both factors.[14]

At autopsy the outstanding pathological findings are: 1. Hemorrhage (multiple, minute) due to rupture of the smaller vessels and capillaries. This is generally found to involve the (a) ear, (b) sclera, (c) thoracic viscera (lungs, pleura, myocardium, endocardium and pericardium), (d) abdominal viscera (gastro-intestinal tract, adrenals, and even the liver, spleen, pancreas, as well as (e) central nervous system may become involved; 2. gross tearing or rupture of the pulmonary alveoli, the aorta, and of the various abdominal viscera may occur.[12,16]

All other things being equal, the extent and severity of the various injuries are determined by the relative size of the explosion or concussion, and varies inversely with the distance that the patient is from the explosion. The amount of protection (clothing, walls, etc.) that intervenes between the patient and the explosion is also an important factor in determining the degree of injury produced, as is also the position of the patient with reference to the point of origin of the blast.[7,8,12,14]

Diagnosis is generally fairly easy, and is determined chiefly by the history of an explosion and blast having actually occurred.

The frequency of aural, pulmonary, alimentary and circulatory lesions is stressed by most writers on the subject, but not so much those involving the central nervous system, which latter are quite important.

Ears.—Rupture of the drum is a common finding. Congestion and hemorrhage into the membrana typani is quite often present. A varying degree of deafness—which may last for an indefinite length of time—is almost always associated with these findings.[21,23]

Eyes.—Retinal and subconjunctival hemorrhage, while not a common finding, has been noted.

Respiratory System.—Often there may be few or no complaints whatsoever. It has been noted that respiratory failure may occur—due to hemorrhage involving the respiratory center in the brain. In this event it is suggested that artificial respiration should be continued for an indefinite period of time, and may prove life saving. In severely injured people the physical findings during the first twenty-four hours may be very few, but later they may develop definite signs indicative of actual pneumonia. The pneumonitis in these instances is not as amenable to therapy as is the usual type of lobar pneumonia. The symptoms often complained of are: 1. pain (substernal), 2. dyspnoea, 3. hemoptysis, 4. feeling of tightness about the chest.[10,19,22]

Circulatory System.—Except for those few cases resulting in rupture of the aorta, or of hemorrhage into the pericardial sac or into the myocardium, there are very few symptoms directly referable to the circulatory system. Disturbance of the blood pressure reading is, however, not an uncommon finding. This is hardly ever due to direct involvement of the cardiac-vascular system, but is caused by

*The material for this article was collected, for the most part, from personal observations made while serving with a very active Field Hospital of the E. T. O.

hemorrhage into the adrenal gland, with resulting rapid atrophy. It is generally believed that a systolic blood pressure below 100 mm. of mercury will result in death of the patient.

Gastro-Intestinal System.—Symptoms referable to injury of the gastro-intestinal tract are occasionally found in a certain number of patients—(pain, and rigidity of upper abdomen, nausea, vomiting, hematemesis, melena, etc.). These symptoms are not often complained of. This is surprising, in view of the fact that at autopsy, subserous hemorrhages may very often be found throughout the entire gastro-intestinal tract. Extensive subserous hemorrhage seemed to account for the symptoms of acute surgical conditions of the abdomen in a number of cases. Hemorrhages are not uncommon in the mesentery. Perforation of the stomach or of the intestine has also been a finding, as has peritonitis.

Nervous System.—It is not an infrequent occurrence to find symptoms presented on this score. Respiratory failure is not too uncommon. Cerebral concussion occurs quite often—but this is almost always due to the fact that the patient is often thrown to the ground, etc. Subdural hemorrhage on the under surface of the forebrain has occasionally been reported (Stewart and Mott—cited by Theis).

Paraesthesias, anaesthesia, paralysis, etc., involving the various peripheral nerves has also been found in some cases.[5, 6, 7, 20] Certain psychoneuroses are a not infrequent accompaniment, and in many cases these are mild in severity and limited in duration.[21]

The following cases, which have come under our observation, may be briefly cited: J. D., an officer on an L. S. T., was admitted to our hospital following an attack on his ship by a submarine torpedo in the English Channel. He was in shock, and somewhat disoriented, and, except for a slight laceration of the scrotum, the physical examination was entirely negative. His responses to questions, while intelligent, were obviously slowed. He was suffering from partial amnesia and aphasia. At one to two hourly intervals he was asked the following questions repeatedly, by the same medical officers:

1. "Hello Lieutenant, how are you?"
2. "Anything bothering you?"
3. "What happened to you?"
4. "Did you ever see me before?"

For four and one-half days he gave the same answers in the same monotonous, unanimated and uninterested tone.

1. "Hello Captain."
2. "No."
3. "Don't know."
4. "No."

The afternoon of the fifth day a sparkle appeared in his eyes; he became suddenly alert and manifested a normal interest in himself and in his surroundings. His answers to these questions were now as follows:

1. "I'm O.K. Captain; how are you?"
2. "I don't really know, but I don't believe so."
3. "Damned if I know. Everything happened so quickly. The last I remember was that I was on the ship—then something happened and everything went blank."
4. "Hell, yes—you're Captain ———; you were here about an hour or so ago, talking to me."

From then on he continued to improve very rapidly and appeared to be perfectly normal. He was evacuated to the rear for rest, convalescence and further observation. Nine months later he still showed no abnormalities.

Several cases of anxiety neuroses, following blast concussion, were also observed. These were mild to severe in the type of their manifestations. Symptoms lasting for varying periods of time.

Deaf mutism has also been noted in a fair percentage of cases. In over 70 per cent this is of a functional nature. The early and proper institution of psychotherapy will result in complete recovery in the vast majority of these patients.[25]

With regard to the therapy and the handling of cases of blast concussion, the injuries are generally divided into three chief groups: 1. the mild; 2. the moderate; 3. the severe.

The "mild" are frequently overlooked, but, when recognized (substernal pain, tightness of chest, deafness, irritating paroxysmal cough), treatment consists chiefly of absolute rest, reassurance, and close observation for a period of about three weeks.

The "moderate" group often presents problems. It is in this group that associated injuries are almost always present. It is in these cases that our therapeutic acumen is really put to the acid test. Traumatic injuries do not do so well when associated with blast, but it is generally believed that the presence of blast should not materially change the

course of treatment of the obvious traumatic injury (surgery, transfusion, application of casts, etc.).

The "severe" cases of blast need no further comment, because almost always the patient will die, and most often within the first twenty-four hours.

The following case is being presented in order to bring out and emphasize a number of pertinent points regarding the handling of cases of blast concussion. 1. With a history of an explosion having occurred within a reasonable distance of the patient, a diagnosis of blast concussion must always be seriously considered—as the primary or as an associated condition. 2. The futility of repeated intravenous or subcutaneous infusions should be borne in mind in the treatment of the syndrome caused by blast concussion *per se*. Shock, secondary to fluid loss, due to extensive damage to pulmonary epithelium, with resulting loss of large amounts of circulating fluid into the lungs, may be quite severe. It should be borne in mind that any increase in the intravascular hydrostatic pressure resulting from the parenteral introduction of fluids into the pulmonary tissue. This results in asphyxia and in early death.

CASE REPORT

Major G. E. D. was wounded 26 December 1944, at 1500 hours. A number of very high powered explosives were dropped relatively close to him. He was taken to the aid station, etc., and finally was admitted to the ———— Evacuation Hospital, 26 December at 2100 hours—just six hours after being wounded—in a condition of "impending shock", with "multiple penetrating wounds of the back, neck, both upper and lower extremities." His wounds were debrided and the usual treatment instituted (penicillin, shock, etc.) At 2040 hours, the pulse was 80 per minute and the blood pressure 130/76. At 2100 hours he was given 500 cc. of plasma; at 2345—500 cc. of whole blood, and 0200 hours (27 December 1944) 500 cc. of plasma were administered. At 1200 hours he received 1,000 cc. of 5 per cent glucose in saline. At 2000 hours of 27 December he was transferred to the ———— Field Hospital (29 hours after being wounded, and only 23 hours after having been admitted to the Evacuation Hospital). At 2100 hours it was noted that his general condition was very poor; blood pressure at this time was 40/0. At 2130 he was given morphine sulphate grains ¼: at 2200 hours he was given 20,000 units of penicillin and 15 grains of sulfadiazine; at 2300 hours he was given an intravenous infusion of 1,000 cc. of 5 per cent glucose in saline. At 0125 hours (28 December 1944) his blood pressure was noted as 60/58; at 0200 hours the blood pressure dropped to 40/20. He was now given 500 cc. of plasma. (At this time the nurse who had been caring for him suggested the possibility of the diagnosis of blast concussion. This was concurred in by the attending surgeon.) At 0230 hours his condition appeared quite critical. He was given 2 cc. of coramine and several minutes later 1 cc. of 1-1,000 adrenaline. At 0300 hours he was pronounced dead (36 hours after being wounded).

Autopsy performed at 1500 hours of 28 December 1944. Only the positive findings will be noted here. Rigor mortis was quite marked. Ears and sclerae were negative. Multiple penetrating wounds, as noted above. Numerous petechiae, of varying sizes, were noted over the entire gastro-intestinal tract—just under the serosa. These were especially abundant and very prominent in the duodenum, jejunum, upper ileum and, to some extent, in the subserosa of the stomach, but most severe about the ileo-cecal area. The blood vessels of the mesentery all appeared very much enlarged. Pericardial cavity—A little more than 300 cc. of free blood was present. Lungs—When placed in a pail of water all the lobes sank to the bottom at once. The visceral pleura, covering the entire lung surfaces, showed the presence of very small hemorrhages, just under the pleural surfaces. Cut surface of any portion of any of the lobes—and in any direction—presents a dark blue-black color, except for a very small strip about the hilum of both lungs. Scraping of the cut surface showed blood and a very small amount of air bubbles. The bronchi appeared to be quite normal. The blood vessels all appeared to be moderately engorged—especially the medium and larger sized pulmonary veins. Adrenals—Very little, if any, adrenal tissue could be demonstrated. What appeared to be the capsule was filled by a blood clot.

The microscopic examination of the lung tissue was reported as follows (reported by Major Reuben Cares, Chief of Pathology Section, Seventh Medical Laboratory):

"Lungs: The alveoli are diffusely filled with a hemorrhagic exudate, and edema fluid. The vessels

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are unusually congested." Final pathological diagnosis:

1. Hemorrhage, pulmonary, severe, bilateral.
2. Hemopericardium, severe (cardiac tamponade).
3. Numerous areas of ecchymosis and petechiae scattered throughout the visceral pleura and in the subserosa of the entire gastro-intestinal tract.
4. Congestion, passive of viscera.
5. Autolysis of both adrenal glands (caused by hemorrhage into glands).
6. Wounds, penetrating, multiple of body.

COMMENT

In summarizing, and looking back over the various aspects of our cases, several points are brought out and become clear and should be emphasized. In every case in which there is a history of an explosion, the diagnosis of "blast concussion" should be entertained—as the primary or as an associated condition. In any case in which such a history is obtained and can be substantiated, this diagnosis should always be assumed, until it is definitely proven to be otherwise.

The possibility of hemorrhage into the adrenal glands, with resulting atrophy and immediate dysfunction, should not be lost sight of—and the Waterhouse-Friedrichson syndrome should not be forgotten. The symptoms of shock—primary or secondary—must be remembered, and treated appropriately.[24] It should, however, also be remembered that parenteral administration of fluids is not a panacea for all the ills that men may be heir to, and that over-burdening of a circulatory system, whose efficiency has been impaired and lowered (rupture of smaller vessels, capillary bed, alveoli, and even of the larger vessels [aorta] and of the viscera, etc.) will simply add to the burden of this damaged circulatory system.

The fact that various neurological as well as some types of psychoneuroses may often be seen in cases of blast concussion, should also be emphasized.

Treatment and handling of those cases is largely determined by accurate diagnosis and taking full cognizance of all the facts as well as an understanding of the underlying pathological physiology involved—and a realization that although, ". . . time is of the essence,"—very careful and cautious early handling in a negative as well as in a positive manner is essential.

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IMMEDIATE POSTPARTUM REPAIR OF PERINEAL LACERATIONS

COMMITTEE ON MATERNAL HEALTH
MEDICAL SOCIETY OF VIRGINIA

After delivery of the baby and placenta, the care of the mother is not complete without a careful examination of the perineum and vagina. Lacerations in both areas are common following normal spontaneous deliveries and should not be overlooked because the patient had a short easy labor and delivery. Fatalities have followed the failure of detection and consequent repair of lacerations.

Often the first indication of a laceration is a small amount of bright red blood as the shoulders and thorax are being delivered. As a rule, during expulsion of the head the soft tissues are compressed and bleeding does not occur. Blanching of the skin, especially along a former suture line, while the head is crowning, will indicate the site of laceration.

Immediately following the second stage, bleeding may not be evident for a few minutes but then become the outstanding diagnostic sign. The reduction of blood loss is the first consideration in the immediate repair of perineal and vaginal lacerations.

In obese patients, otherwise easily detected perineal lacerations may be obscured by a fold of fat. Careful inspection with separation of the labia is required for exposure. This inspection is necessary in thin patients should the laceration extend to the muco-cutaneous border of the anus.

Sulcus tears, as well as all vaginal tears, require wide exposure because of folds in the mucous membrane. Ordinary specula may suffice but, as a rule, "L" bladed retractors are of much greater help.

Superficial lacerations around the urethra ordinarily do not bleed excessively, but should be repaired because of their interference with urination.

It is doubtful whether routine inspection of the cervix is indicated but it should be done whenever it is under suspicion and in all instances of unusual bleeding. Here, exposure is all important and requires a good light, retractors and anesthesia.

In addition to the reduction in blood loss, the immediate repair of lacerations diminishes infections and promotes healing. Within twelve to twenty-four hours, and sometimes sooner, there is marked edema which complicates the repair and decreases the chances of primary union. The patient is immeasurably more comfortable with an immediate repair. This comfort is not only evident in the puerperium but also in later life because of the absence of scarring and improved perineal support. In addition, improved support usually eliminates the need for plastic operations at the end of the reproductive period.

In recent years the trend has been toward the use of finer suture material in all branches of surgery. 00 and 0 chromic catgut cause less tissue reaction and, by virtue of the lesser reaction, are conducive to better results. Mass suturing is condemned in all instances because of tissue strangulation and inaccurate anatomical tissue apposition. A more normal function will be restored when like tissue is accurately approximated without strangulation or tension.

The extent of the laceration will often determine the type of anesthetic. In the vast majority of cases local use of novocaine is sufficient. The majority of tears through the sphincter and into the rectum, and those in the sulci and cervix will require pudendal block, spinal or general anesthesia. The more extensive tears are better managed in a hospital. Some may require consultation.

It is well to keep in mind that a tear may be avoided, or its extent reduced, by an episiotomy.

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PUBLIC HEALTH

L. J. ROPER, M. D.
State Health Commissioner of Virginia

The report of the Bureau of Communicable Diseases of the State Department of Health for September, 1946, as compared with the same month in 1945, and for the period of January through September, 1946, compared with the same period in 1945, follows:

	Sept. 1946	Sept. 1945	Jan.-Sept. 1946	Jan.-Sept. 1945
Typhoid and Paratyphoid	13	43	98	128
Diarrhea and Dysentery	198	1,773	2,323	6,228
Measles	56	19	12,887	1,255
Scarlet Fever	94	216	2,175	2,902
Diphtheria	53	66	345	232
Poliomyelitis	19	109	86	283
Meningitis	12	11	178	198
Undulant Fever	7	5	49	26
Rocky Mountain Spotted Fever	13	14	89	92
Tularemia	5	6	50	38

TULAREMIA

Recently the State Department of Health began the tabulation of data on 1,000 cases of tularemia. Beginning in 1929 questionnaires were sent to all physicians reporting a case of tularemia with the request that they be filled out and returned to the State Department of Health. Through 1945, 1,136 cases were reported and 1,000 questionnaires returned. Since no unusual effort was made to expedite the return of these questionnaires, it is exceedingly gratifying to note the cooperation of the physicians in returning 96.5 per cent of these queries.

In reviewing the information obtained from the physicians several interesting facts have been noted. First, the number of cases reported as having been acquired by means other than the handling of wild rabbits is much larger and more varied than expected. Although the handling of wild rabbits is by far the most common method of contracting the disease, it was noted that in at least 28 instances a tick was incriminated, in 13 the cat, in 5 the opossum, in 4 the skunk, in 3 the dog, in 2 the woodchuck, in 2 the quail, in 2 the squirrel and in 2 the hog. One case was attributed to each of the following animals or insects: sheep (shearing), raccoon, fox, chicken, rat, deer fly, and flea. In all, at least 6.8 per cent of cases are believed to have been acquired through contact with 16 animals other than the rabbit.

In studying the modes of transmission of the disease, it was found that 3 individuals acquired it by carrying game. In one instance the killed rabbit was tied to the belt and apparently bled on the trousers' leg. This patient had ulcers about the knee and calf of the leg. Another individual carried rabbits in a hunting coat and developed a large ulcer on his back in the area where the rabbits pressed against him. A third person developed ulcers on his abdomen where burns previously acquired became infected by carrying squirrels which he had killed.

The case fatality of tularemia varied according to season. Of the cases studied 73.5 per cent occurred in the winter months; that is, the date of onset was between October 1st and March 1st. For this group the fatality rate was 6.6 per cent. The 26.5 per cent of the cases occurring in the summer showed a higher fatality rate of 11.3 per cent. The probability that the differences in the two rates could occur by chance alone is approximately 1 in 40. Therefore it is felt that there is a true seasonal variation in the severity of the disease.

With the increasing supply of streptomycin, the disease has lost much of its significance. In no other infection is the action of this antibiotic so dramatic. If given early in the disease, there is a prompt response with temperature falling to normal in 24-48 hours and marked improvement in both local and constitutional symptoms. If given late in the disease, however, there is little or no effect on the course of the disease. Streptomycin, if properly used, will make tularemia of little more importance than the common cold.

FORUM

Commission On Post-Mortem Examinations.

An outstanding piece of legislation enacted during the last General Assembly was the creation of a Commission on Post-Mortem Examinations, and prescribing its powers, duties and functions. The Medical Society of Virginia's Committee on Medical Examiner System, headed by Dr. Wyndham B. Blanton, was largely responsible for the passage of this bill. The Commission consists of five ex-officio members—the Attorney General, the State Health Commissioner, the Superintendent of State Police, and the Deans of the State's two Medical Schools. One of their first duties was to appoint a Chief Medical Examiner, and one or more coroners for each county and city in the State having no coroner in office on October 1st, 1946.

Dr. Herbert Stewart Breyfogle of St. Louis has been named as Virginia's first Chief Medical Examiner. He is a native of Kansas City and thirty-three years of age. At present he is Director of the Medical-Legal Department of St. Louis County, pathologist for St. Louis County Hospital, instructor at Washington University School of Medicine, and acting coroner of St. Louis County. He will have the use of office space and laboratory facilities at the Medical College of Virginia. As it is likely that Dr. Breyfogle will be unable to assume his duties until the first of the year, Dr. George Zur Williams, pathologist at the Medical College of Virginia, has been named to fill this position, pending Dr. Breyfogle's arrival.

Coroners to represent cities and counties named to October 9th are:

CITY	CORONER	ADDRESS
Buena Vista	Dr. R. R. Eason	Buena Vista
Clifton Forge	Dr. L. A. Houff	Clifton Forge
Martinsville	Dr. H. G. Hammond	Martinsville
Williamsburg	Dr. J. M. Henderson	Williamsburg
Winchester	Dr. Herman I. Pifer	Winchester

COUNTY	CORONER	ADDRESS
Accomack	Dr. Jos. L. DeCormis	Accomac
Amelia	Dr. James T. O'Neal	Amelia C. H.
Appomattox	Dr. C. G. O'Brien	Appomattox
Bath	Dr. I. T. Hornbarger	Hot Springs
Bedford	Dr. E. L. Johnson	Bedford
	Dr. W. V. Rucker	Bedford
Buckingham	Dr. Garland Dyches	Dillwyn
	Dr. W. A. Pennington	Buckingham
Charlotte	Dr. Thomas Watkins	Drakes Branch
	Dr. H. C. Chalmers	Brookneal
Clarke	Dr. Frank Tappan	Berryville
Cumberland	Dr. E. B. Nuckols	Cumberland
	Dr. N. P. Snead	Cartersville
Dinwiddie	Dr. W. J. Mayes	Church Road
Essex	Dr. J. W. Chinn	Tappahannock
	Dr. J. M. Gouldin	Tappahannock
Fauquier	Dr. George H. Davis	Warrenton
	Dr. J. E. Knight	Warrenton
Fluvanna	Dr. J. H. Yeatman	Fork Union
	Dr. A. C. Whitley	Palmyra
Frederick	Dr. Herman I. Pifer	Winchester
Gloucester	Dr. H. A. Tabb	Gloucester
	Dr. James W. Smith	Hayes Store
Greensville	Dr. G. M. Naff	Emporia
Hanover	Dr. A. E. Murray	Beaverdam
	Dr. Judson Vaughan	Ashland
	Dr. A. B. Gravatt	Ellerson
Henry	Dr. D. H. Mason	Ridgeway
	Dr. L. A. Faudree	Bassett
James City	Dr. A. M. Sneed	Toano
King and Queen	Dr. R. D. Bates	Newtown
King William	Dr. A. W. Lewis	Aylett
	Dr. W. H. Hosfield	West Point
Lee	Dr. Grover Sumpter	Rose Hill
	Dr. Thomas S. Ely	Jonesville
Louisa	Dr. H. W. Judd	Mineral
Lunenburg	Dr. H. B. Showalter	Kenbridge
Mathews	Dr. R. B. Bowles	Mathews
	Dr. John R. Gill	Mathews
Middlesex	Dr. H. F. Hoskins	Saluda
New Kent	Dr. J. R. Parker	Providence Forge
Northampton	Dr. J. G. Goode	Cape Charles
	Dr. J. E. Gladstone	Exmore
Northumberland	Dr. M. N. Neal	Heathsville
	Dr. Leonard Booker	Lottsburg
Nottoway	Dr. J. M. Hurt	Blackstone
Page	Dr. George H. Long	Luray
Patrick	Dr. B. A. Hopkins	Stuart
	Dr. A. M. Gates	Ararat
Pittsylvania	Dr. H. H. Hammer	Chatham
Prince Edward	Dr. W. Edward Smith	Farmville
Rappahannock	Dr. John P. Snead	Sperryville
Shenandoah	Dr. Harold Miller	Woodstock
Sussex	Dr. R. B. McEwen	Wakefield
	Dr. Maurice Rosenburg	Waverly
Warwick	Dr. Melvin R. Horne	Hilton Village
	Dr. C. P. Jones, Jr.	Hilton Village
Westmoreland	Dr. Edward T. Ames	Montross
	Dr. Charles H. Griffith	Machodoc
Wise	Dr. N. F. Hix	Wise
York	Dr. L. O. Powell	Seaford

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Progress Report on the Study of Child Health Services.

The survey of the Child Health Services in Virginia which was begun in March, 1946, is near its conclusion. With the exception of North Carolina in which the pilot survey was made, Virginia is the third in line with its survey to date.

The returns on the survey, while not perfect, are gratifying nevertheless. They are as follows:

	Number in Virginia	Percentage Survey Completed
General Hospitals	112	100
Community Health Organizations	91	94
Physicians	2,107	63
Dentists	935	61
Pediatricians	65	86

These report schedules now have been sent to the central office for tabulation. After tabulation the results will be sent back to the Executive Committee of the Virginia Study for presentation to those groups and organizations for whom such information would be of help in the development of a future constructive program. These may be state groups or local county groups.

Such questions as these may be answered for Virginia:

What is the volume of care rendered to children?

Are physicians and dentists available in all areas to care for children?

How far do children have to travel to see a specialist?

Where are the hospitals that take children?

What are the hospitals like and how far away?

Where are out-patient services available?

For each community, what services are available by official and voluntary agencies?

What is the volume of care?

Who gives it?

Who receives it?

What is it like?

These are only sample questions for which answers will be available. The figures can be broken down for counties or given as state totals.

It is hoped that the tabulations may be completed for Virginia by mid-year of 1947.

Annual Post-Graduate Course at University of Virginia Hospital.

Below is given the program for the post-graduate courses in Ophthalmology and Otolaryngology to be held at University Hospital, Charlottesville, December 9-12:

Monday, December 9

9:00-9:30 A. M.—Assembly and registration.

9:30-10:30 A. M.—Sympathetic Ophthalmitis and Tuberculosis of the Globe—Dr. Bernard Samuels, Surgeon and Pathologist, New York Eye and Ear Infirmary, and Dr. E. Burchell, Director Eno Laboratory, New York Eye and Ear Infirmary, New York.

10:35-11:35 A. M.—Ocular Manifestations of Congenital Syphilis—Dr. Alan C. Woods, Ophthalmologist-in-Chief, Johns Hopkins Hospital, Baltimore.

11:40 A. M.-12:40 P. M.—Surgical Correction of Eye Muscle Errors—Dr. A. D. Ruedemann, Cleveland Clinic, Cleveland, Ohio.

1:00-2:00 P. M.—Lunch.

2:00-3:00 P. M.—Hysterical Amblyopia with Reference to Confused Diagnosis—Dr. S. Judd Beach, Ophthalmologist, Maine Eye and Ear Infirmary, Portland, Maine.

3:05-4:05 P. M.—Pathological Conditions of the Fundus Seen with the Ophthalmoscope—Dr. Bernard Samuels and Dr. E. Burchell.

4:10-5:10 P. M.—Ocular Manifestations of Acquired Syphilis—Dr. Alan C. Woods.

Tuesday, December 10

9:00-10:00 A. M.—Treatment of Cataract—Dr. A. D. Ruedemann.

10:05-11:05 A. M.—Routine Examination of the Eye—Dr. S. Judd Beach.

11:10 A. M.-12:10 P. M.—Perforating Wounds of the Globe—Dr. Bernard Samuels and Dr. E. Burchell.

1:15-2:00 P. M.—Lunch.

2:00-3:00 P. M.—Ocular Brucellosis—Dr. Alan C. Woods.

3:05-4:05 P. M.—Full Eye Plastic Implant—Dr. A. D. Ruedemann.

4:10-5:10 P. M.—Refraction—Dr. S. Judd Beach.

6:30 P. M.—Banquet Farmington County Club.

Wednesday, December 11

9:00 A. M.—Registration.

9:30-10:30 A. M.—Anatomy of the Temporal Bone, illustrated by lantern slides and anatomical specimens—Dr. Edgar B. Burchell, The Eno Laboratory, New York Eye and Ear Infirmary, New York City.

10:45-11:45 A. M.—Rhinoplastic Submucous Resection—Dr. Dean M. Lierle, Professor of Otolaryngology and Oral Surgery, University of Iowa, Iowa City.

12:00-1:00 P. M.—Carcinoma of the Larynx and Hypopharynx: Irradiation and Surgical Concepts—Dr. Gabriel Tucker, Professor of Broncho-Esophagology, Graduate School, University of Pennsylvania, Philadelphia.

1:00-2:00 P. M.—Luncheon.

2:00-3:00 P. M.—Plastic Surgery of the Ear: Fundamental principles and Technic—Dr. John Marquis Converse, New York City.

3:15-4:15 P. M.—The Lymph Pump Mechanism of the

Nose and Para-Nasal Sinuses—Dr. J. M. Robison, Professor of Otolaryngology, University of Texas Medical School, Houston, Texas.

4:30-5:30 P. M.—Anatomy of the Nose and Sinuses—Dr. Edgar B. Burchell.

THURSDAY, DECEMBER 12

9:00 A. M.—Registration.

9:30-10:30 A. M.—The Application of Local Pressure to the Mucosa of the Maxillary Sinus—Dr. J. M. Robison.

10:45-11:45 A. M.—Plastic Surgery of the Nose: Fundamental Principles and Technic—Dr. John Marquis Converse.

12:00-1:00 P. M.—What Criteria Should be Used in Recommending the Purchase of a Hearing Aid? and the Present Status of Hearing Surveys in the Public Schools—Mr. J. M. Mullendore, Assistant Professor of Speech Education and Director of the Speech Clinic, University of Virginia, Charlottesville.

1:00-2:00 P M.—Luncheon.

2:00-3:00 P. M.—Obstructive Dyspnea: Bronchoscopic Aid in Diagnosis, Treatment, and Tracheotomy—Dr. Gabriel Tucker.

3:15-4:15 P. M.—Histo-Anatomy and Physiology of the Middle Ear Tract—Dr. Dean M. Lierle.

4:30-5:30 P. M.—Roentgenograms of the Skull of Interest to the Otolaryngologist—Dr. Francis H. McGovern, Danville, Dr. George Cooper, Jr., Associate Professor of Roentgenology, University of Virginia, and Dr. G. Slaughter Fitz-Hugh, Assistant Professor of Otolaryngology, University of Virginia.

WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

President..... MRS. J. E. HAMNER, Petersburg
President-Elect..... MRS. J. L. DECORMIS, Accomac
Recording Secretary..... MRS. M. H. HARRIS, West Point
Corresponding Secretary, MRS. MEADE EDMUNDS, Petersburg
Treasurer..... MRS. REUBEN SIMMS, Richmond

Annual Meeting.

The twenty-fourth annual meeting of the Woman's Auxiliary to the Medical Society of Virginia was held Tuesday, October 15th, at the Cavalier, Virginia Beach, with Mrs. Peyton Moncure Chichester of Richmond presiding. There were about seventy-two members and guests at the annual luncheon, at which guest speakers were Mrs. J. D. Hamer of Phoenix, Arizona, president of the Auxiliary to the American Medical Association, Mrs. W. W. Potter of Concord, Tennessee, president of the Auxiliary to the Southern Medical Association, Dr. Julian L. Rawls of Norfolk, president and Mr. Henry S. Johnson of Richmond, director of Public Relations and Medical Service of the Medical Society of Virginia.

Mrs. H. F. Dormire of Virginia Beach was chairman of local arrangements, with Mrs. C. M. McCoy of Norfolk as co-chairman.

Mrs. J. E. Hamner of Petersburg was installed as president at the close of this meeting, and the following officers were elected to serve with her: president-elect, Mrs. J. L. DeCormis, Accomac; vice-presidents, Mrs. Robert Hightower, Alexandria, Mrs. Roy Upchurch, Danville, Mrs. Southgate Leigh, Jr., Norfolk, and Mrs. A. G. Shetter, Richmond; recording secretary, Mrs. M. H. Harris, West Point; corresponding secretary, Mrs. Meade Edmunds, Petersburg; treasurer, Mrs. Reuben F. Simms, Richmond; parliamentarian, Mrs. E. Latane Flanagan, Richmond; and historian, Mrs. H. A. Latane, Alexandria.

Auxiliary to Richmond Academy of Medicine.

At the September luncheon meeting of this Auxiliary, the following officers were installed by the parliamentarian, Mrs. E. L. Flanagan: Dr. Matilda Chalkley, president; Mrs. L. C. Brawner, president-elect; Mrs. G. D. Vaughan, vice-president; Mrs. Edgar Childrey, treasurer; Mrs. W. A. Young, recording secretary; Mrs. L. J. Buis, corresponding secretary; Mrs. E. S. Ray, assistant; Mrs. B. L. Randolph, historian; and Mrs. E. L. Flanagan, parliamentarian.

The president announced the appointment of the following committee chairmen: *Social,* Mrs. T. F. Wheeldon; *membership,* Mrs. A. G. Shetter; *Publicity,* Mrs. W. R. Morton; *Public Relations,* Mrs. E. L. Flanagan; *Personal Relations,* Mrs. R. F.

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Simms; *Philanthropic*, Mrs. E. C. Matthews (Crippled Children's Hospital); and Mrs. E. S. Ray (T. B. Clinic).

The president announced the donation of $500 to Sheltering Arms Hospital. This amount was the proceeds from a benefit bridge party given in May, and would enable the hospital to reopen the children's ward.

MYRTLE G. MORTON (MRS. W. R.)
Publicity Chairman

Auxiliary to the Northampton-Accomac Medical Societies.

This Auxiliary held its regular quarterly meeting on October 8th, as guests of Mrs. John Wise Kellam at her attractive cottage at Silver Beach, with fifteen members and one guest present.

A delightful luncheon and social period preceded the business meeting, at which Mrs. S. S. Kellam of Cape Charles presided. She reported 29 members for the eleventh year of the Auxiliary, two of whom, Mrs. W. Carey Henderson and Mrs. J. L. DeCormis are State Officers.

A letter was read by the treasurer, Mrs. J. H. Hiden, from Mrs. Fletcher J. Wright of Petersburg, thanking the Auxiliary for its contribution to the Leigh-Hodges-Wright Memorial Fund, stating that there was a young physician at Blue Ridge receiving this aid at present.

The sum of one hundred and fifty dollars was put aside toward the Memorial Fund in memory of the late Grace Wilkins Holland, former State President and charter member of the Auxiliary. Mrs. S. K. Ames of Cape Charles was appointed Chairman for this fund.

The Program for the Twenty Fourth Annual State Meeting at Virginia Beach on October 15th was announced, with Mrs. J. L. DeCormis, of Accomac, State Officer, who will present the President's report of the Auxiliary for the year 1946, representing this auxiliary.

"The Doctor's Wife," an address to the Woman's Auxiliary to the American Medical Association, by a former President, Dr. Rock Sleyster, was read.

The following slate of officers for the coming year was then presented to the Auxiliary, and they were elected as a whole: President, Mrs. B. N. Mears, Belle Haven; vice-president and president-elect for 1948, Mrs. S. K. Ames, Cape Charles; treasurer, Mrs. J. Walker Jackson, Machipongo; secretary, Mrs. Jno. W. Robertson, Onancock; and recording secretary, Mrs. Holland Trower, Eastville.

The retiring president, Mrs. S. S. Kellam then submitted her yearly report and presented the gavel to Mrs. S. K. Ames, the Vice-President and President-elect for 1948, in the absence of the incoming president, Mrs. B. N. Mears. A message was read from Mrs. Mears asking that the same Committee Chairmen be appointed to serve with her for the incoming year.

Mrs. E. W. P. Downing then recited a poem in honor of the retiring president, Mrs. Kellam.

A new member, Mrs. C. T. Garcia of Cape Charles, was welcomed into the Auxiliary.

At the January meeting, the Auxiliary will be the guests of Mrs. J. Walker Jackson of Machipongo.

CATHERINE R. TROWER.
(MRS. HOLLAND)
Chairman, Press and Publicity.

New Books.

Among the recent additions to the Library of the Medical College of Virginia are:

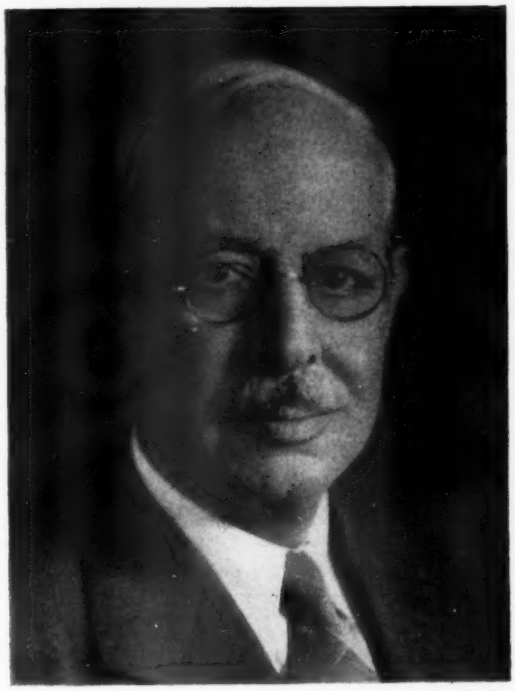
Allen—Perifual vascular diseases.
Bauer—Health education of the public.
Berens—Diagnostic examination of the eye.
Bochner—The clinical application of the Rorschoch test.
Brain—Recent advances in neurology and neuro-psychiatry.
Elwyn—Diseases of the retina.
Goldring—Experimental hypertension.
Green—Currents in biochemical research.
Hamilton—Industrial toxicology.
Hill—Anatomy of the head and neck.
Katz—Exercises in electrocardiographic interpretation.
Klapman—Group psychotherapy: theory and practice.
MacKee—X-ray and radium in treatment of diseases of the skin.
Pillmore—Clinical radiology.
Soskin—Carbohydrate metabolism.
Stone—The diagnosis and treatment of pulmonary tuberculosis.
Ward—New worlds in medicine.
Williams—What to do about vitamins.

EDITORIAL

New President
Medical Society of Virginia

OUR incoming President was born in Winchester, Virginia, on August 31, 1876, and at the present time plays an excellent game of tennis. These two facts certainly indicate he is now seventy years young and active.

Dr. William Leven Powell first attended the public schools of his birthplace, but as his father was a civil engineer and was later employed in the State of Washington,



WILLIAM LEVEN POWELL
President, Medical Society of Virginia

Dr. Powell entered Withworth College of that state. His father (born in Loudoun County, Virginia) and his mother (formerly Miss Magill of Winchester, Virginia) were both Virginians. When the Powell family returned to the Old Dominion, our new President was entered in Miller's School at Crozet, Virginia, where he remained until 1896 when he started his medical career as a student in the Medical Department of the University of Virginia. He received his M.D. from the University of Virginia in 1900. He then began an extensive and varied hospital training.

While at the University he was a member of the Alpha Tau Omega academic fraternity and the Pi Mu honorary medical fraternity. He also belonged to several of the many other honorary social societies. To the writer's personal knowledge, he was generally considered to be one of the most popular students in the University. He

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acquired this reputation due to his friendly personality and consideration of others. Such has remained characteristic of him even after many years of extensive medical experience.

After leaving the University of Virginia, Dr. Powell spent one year in Saint Anne's Infant and Maternity Hospital, Cleveland, Ohio; sixteen months in the State Hospital, Warren, Pennsylvania; eighteen months as an interne in the Polyclinic Hospital, Philadelphia, Pennsylvania; and then six months as resident in the Philadelphia Hospital.

Following this valuable hospital experience, he located in Roanoke, Virginia. During his first two years in this city, he was resident in the Roanoke Hospital. While resident in this hospital, Dr. Powell made many friends among the doctors of this vicinity, which had contributed somewhat to his having acquired and retained a very extensive practice.

He was a captain in the Medical Department of the U. S. Army during World War I. During World War II he was Representative for the Sixth Congressional District of Virginia for the Procurement and Assignment Service for Physicians of the War Manpower Commission. He also volunteered to assist in helping with the thousands of physical examinations which were made by the local Induction Station and remained "on call" for any emergency which might have arisen in such examining centers. In other words, he has more than met the military obligations naturally assumed by all true and loyal American physicians.

He is now Director of the Out-patient Clinic and Chairman of the Executive Committee of the Roanoke Hospital, and as such is of great assistance to the present house officers of that institution.

In 1907 he married Miss Eleanor Kerr of Philadelphia. They had two sons, Randolph now living in Charlotte, North Carolina, and Leven, Jr. who died in 1926. Dr. Powell has been President of the Roanoke Academy of Medicine, is a member of the Southern Medical Association, American Medical Association, Southwestern Virginia Medical Society, etc. He has been a member of the Council of the Medical Society of Virginia for many years. He was formerly a member of the Kiwanis Club, Roanoke County Chapter, but resigned when he found the frequent meetings of the various organizations interfered too greatly with his tennis and fishing activities to which he is devoted.

He has contributed greatly to his community by his active interest in the Community Fund, Chamber of Commerce, etc. However, his greatest contribution to this section of the State is one he has made without his realizing that he was making the same. When Dr. Powell started to practice in Roanoke there existed in this city many "medical factions". Many doctors were not even on speaking terms with each other and only a few making even slightly kindly remarks concerning any other member of the medical profession. Now I know of no other city where "harmony reigns more nearly supreme" than in Roanoke. This is largely due to Dr. Powell's personal example. His ever gracious manner toward and consideration of the other members of his profession will prove to be congenial to the membership of the Medical Society of Virginia where good fellowship and friendship has existed for so many years.

H. H. T.

Muddying The Waters

AT Two Harbors on August 15-18, 1946, was born a new organization for the control of medical service. It was named "A Federation of Co-operative Health Plans." At its birth were some two hundred delegates and visitors from twenty or more States, four Provinces of Canada, Hawaii, and Nova Scotia. Group Health of Wash-

ington, D. C., seems to be the Godfather, and Miss Margaret Klein, Statistician of the Social Security Board, the Godmother. For some reason it is not stated who the parents are.

The purpose of this new organization is to promote the management and control of medical care by the consumers. One of its immediate objects seems to be to get the backing of the Farmers' Home Administration, which is the new name for the Farm Security Agency with its enlarged scope. The basic theme of the Co-ops is that medical care belongs to the consumer, and that the producer, i.e. the physician cannot furnish the leadership that the consumer can in the distribution of medical care, and the maintenance of its quality and its character. By the same token, the customers of Miller & Rhoads, Thalhimers, or Montgomery Ward have the right to determine business policies of these concerns—the kinds of goods they sell, and the manner in which they are to be distributed. No doubt there were times in the past four or five years when the management of these concerns would have been glad to have found someone to take over, but it is certain that the customers would now be in a pretty mess had they done so. As the matter now stands, Messrs. Murray, Dingell, Wagner, Pepper, and Truman want the Federal Government to take over the practice of medicine. This new organization wants the customers to run it. Mr. John L. Lewis has already taken charge of that part of the practice of medicine that has to do with the miner and his family. All agree that the doctor furnishes a very necessary commodity, i.e. medical service, but none thinks he is able to manage his own affairs. All, in their effort to talk themselves into power, stress preventive medicine, but none recognizes that in every State in the Union there is a Health Department anxious to furnish the people all the preventive medicine and honest-to-goodness scientific, preventive medicine that the taxpayers are willing to pay for.

Podagra

IN 208 A.D. the Emperor Severus brought the gout with him to Britain when he came to subdue an uprising in the North. He was so incapacitated that he had to be carried on a litter. Neither he nor the disease ever left the Island. The emperor died at York at the age of 65 years; the disease is still rampant (unless the food shortage incident to World War II has curbed it). We still think of it as a British disease. The dietary habits of the seventeenth and eighteenth centuries in England made it a common disease and the satirists and cartoonists popularized its physiognomy, if a disease may be said to have such. The great Sydenham was the first adequately to describe the disease clinically and his description is a classic, but Rowlandson, Cruikshank and Hogarth popularized its grotesque features.

Much of Sydenham's description is still current. He said "Either men will think that the nature of gout is wholly mysterious and incomprehensible, or that a man like myself, who has suffered from it thirty-four years, must be of a slow and sluggish disposition not to have discovered something respecting the nature and treatment of a disease so peculiarly his own. The difficulties and refinements relating to the disease itself, and the method of its cure, I will leave for Time, the guide to truth, to clear up and explain." He then goes on to tell of the type of persons affected and describes the character of an attack in a most realistic manner. He picks the adjective exquisite in describing the pain, and says that it is so exquisite that the weight of the sheet renders it intolerable. The night is passed in torture, sleeplessness, turning of the affected part, and perpetual change of posture, the tossing about of the body being as incessant as the pain of the tortured joint. Both Sydenham and the cartoon-

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ists noted the associated bad temper. In paragraph 15 Sydenham displays his philosophic mind: "For humble individuals like myself, there is one poor comfort, which is this, viz. that gout, unlike any other disease, kills more rich men than poor, more wise men than simple. Great kings, emperors, generals, admirals, and philosophers have all died of gout. Hereby Nature shows her impartiality: since those whom she favors in one way she afflicts in another—a mixture of good and evil pre-eminently adapted to our frail mortality."

The familiar quotation that more wise men than fools have the disease, commonly ascribed to Sydenham, probably explains why the disease is rarely seen in America now. But is it as rare as we think? May there not be atypical forms of gout that go unrecognized? The editor knows one family in which there were four cases of gout in two generations. None of the afflicted were related by blood to one another. However, they lived in the same house and had the same cook.

Floral Eponym

WITHERINGIA

WILLIAM WITHERING, 1741-1799.

WILLIAM WITHERING, who has the distinction of introducing a valuable remedy into medicine and of formulating rules for its use that are still in use, was born in Wellington, Shropshire, England. His father, Edmund was a successful physician. His mother, Sarah Hector, belonged to a well known medical family. Her father, Dr. George Hector, officiated at the birth of Dr. Samuel Johnson. Withering graduated M.D. at Edinburgh in 1766. When he was a medical student he showed an aversion to Botany, but when he came to practice at Stafford one of his first patients (she afterwards became his wife) was interested in flower painting. During her convalescence, Withering gathered plants for her to use as models. Eight years later appeared the first volume of his great work on Botany, "A botanical arrangement of all vegetables naturally growing in Great Britain, with descriptions of all the genera and species." The fourth and last volume appeared in 1796. After his death three editions were published. In 1775 his opinion was asked concerning an old family recipe for the cure of dropsy which had long been kept secret by an old woman in Shropshire. It contained some twenty ingredients, but it was evident that the active herb could be no other than foxglove. Withering began to experiment with the drug. The turkey was his "guinea pig." In 1779 Dr. Stokes reported the results of Withering's experiments to the Medical Society at Edinburgh and in 1783 digitalis was included in the Edinburgh Pharmacopoeia. His book, which is now of great rarity, "The foxglove, and some of its medical uses, 1785" was written to correct some of the abuses that had already begun to creep in in the use of this valuable remedy. Withering moved to Birmingham where he attained great success. He was also a mineralogist and chemist of note and made valuable observations in the treatment of tuberculosis, a disease of which he died in 1799. When he was on his death bed, someone remarked "The flower of English physicians is indeed Withering." The French botanist, L'Heritier de Brutelle had already named a genus of plant in his honor and this flower is sculptured on the left side of his black marble tombstone in Edgeaston Old Church.

Witheringia does not appear in any botanical work at my disposal. Norman Taylor, Editor of The Garden Dictionary, writes me as follows: "Unfortunately for your floral eponyms *Witheringia* has been used by two different authorities, the first one by L'Herit. Sert. Ang. 1.33. t L (1788). That genus is no longer maintained, being now referred to as *Bassovia* in the Solanaceae. Apparently in ignorance of this fact,

but again to commemorate William Withering, Miers in Ann. & Mag. Nat. Hist. Ser. II. iii. (1849) 145, described the genus *Witheringia*. That genus is also a synonym and is now referred to as *Althenaea* which also belongs to the Solanaceae."

NOTE: Withering had four tenuous but interesting American connections. 1. A fellow student at Edinburgh was Walter, a Virginian who became a physician of note and a member of the House of Burgesses. 2. His removing to Birmingham was occasioned by the death of Dr. Small who had once been professor of natural philosophy at William and Mary College. Withering succeeded both to Dr. Small's practice and to his membership in the famous Lunar Society. 3. Benjamin Franklin, who was sometimes a guest of the Lunar Society, wrote to him from Paris for his cure of the stone. 4. Dr. Osler gave a collection of Withering's letters to the Royal Society of Medicine in London.

SOCIETIES

Southwestern Virginia Medical Society.

The annual Fall meeting of this Society was held at the Governor Tyler Hotel, Radford, on October 3rd, under the presidency of Dr. A. P. Jones of Roanoke. The afternoon program included the following papers:

Lesions of the Esophagus and Stomach from X-Ray Standpoint—Charles H. Peterson, M.D., Roanoke.

The Management of Infants and Children with Allergic Problems—W. Ambrose McGee, M.D., Richmond.

Public Relations—Henry S. Johnson, Director of Public Relations, Medical Society of Virginia.

The Principles and Objectives of the Association of American Physicians and Surgeons—Harry E. Northam, Chicago.

Between the afternoon and evening sessions, there was a Cocktail Hour and Banquet at the Hotel, as also a business session. There was an attendance of 55 at the afternoon session and approximately 100 at the banquet.

After the banquet, the guest speakers gave their papers:

Carotid Sinus Syndrome with Surgical Treatment: Case Reports—J. M. Emmett, M.D., Clifton Forge.

Choice of Obstetrical Instruments—Edward H. Dennen, M.D., New York.

Dr. Jones, President, made a short talk.

At the business session, several doctors were admitted to membership and officers were elected for the coming year: President, Dr. Charles F. Graham of Wytheville; Vice-President, Dr. Douglas Vance of Bristol; and Secretary-Treasurer, Dr. A. F. Giesen of Radford, re-elected.

Dr. W. C. Caudill of Pearisburg was appointed to the Judiciary Committee to fill a vacancy, and Dr. T. L. Gemmill of Radford was elected to the Executive Committee, the other members being Dr. R. M. DeHart of Radford, chairman, and Drs. W. A. Porter of Hillsville, A. P. Jones of Roanoke, and Beverley F. Eckles of Galax.

The Spring meeting will be held in the first week of May, 1947, the place of meeting probably being Marion.

The Bedford County Medical Society

Was entertained at a dinner meeting on the evening of October the 18th by the Bedford Pharmacists. The guest speaker was Dr. R. Blackwell Smith, assistant dean of Pharmacy at the Medical College of Virginia, who gave an interesting talk on "Some Methods of Providing Medical Care for All Our Citizens". Dr. J. G. Jantz and Dr. W. G. Hardy, both of Bedford, are president and secretary, respectively, of the Society.

Louisa County Medical Society.

This Society, at its meeting on September 24, named Dr. H. S. Daniel of Louisa as its delegate to the State Society meeting. Dr. E. B. Pendleton of Cuckoo was elected president and Dr. J. Langdon Moss, who recently located in Louisa, was elected secretary.

The Lynchburg Academy of Medicine

Held its regular monthly meeting on September 16th at the Lynchburg General Hospital, under the presidency of Dr. Edwin A. Harper. After a short business session, Dr. Charles E. Troland of the Medical College of Virginia, Richmond, presented a very interesting and informative paper on "Present Day Concept of Herniated Intervertebral Disc." The paper was enjoyed by all and several questions were asked by various members to which Dr. Troland gave detailed answers.

H. W. HOLLINGSWORTH, *Secretary*

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NEWS

The State Meeting.

The annual meeting of the Medical Society of Virginia at the Cavalier, Virginia Beach, October 14-16, under the presidency of Dr. Julian L. Rawls of Norfolk, was well attended and was in every way a great success. Minutes of the meeting will appear in the December *Monthly*. As a matter of immediate interest, however, Dr. W. L. Powell of Roanoke was inducted as president at the closing session. Other officers are: President-elect, Dr. Guy Fisher of Staunton; vice-presidents, Dr. A. Brownley Hodges, Norfolk, Dr. Carrington Williams, Richmond, and Dr. W. C. Akers, Stuart; executive secretary-treasurer, Agnes V. Edwards, Richmond. Drs. C. L. Harrell of Norfolk, Jas. L. Hamner of Mannboro, and J. E. Knight of Warrenton were named to succeed themselves as councilors, with Dr. W. R. Whitman of Roanoke as the only new councilor. Dr. J. Morrison Hutcheson and Dr. Carrington Williams, both of Richmond, were re-elected as delegate and alternate-delegate to the American Medical Association.

It was voted to hold the 1947 meeting at the Hotel Roanoke, Roanoke, dates to be announced later.

Special Society Meetings.

Several special societies held their annual meetings at the time of the State meeting and elected officers for the coming year. They are:

VIRGINIA OBSTETRICAL AND GYNECOLOGICAL SOCIETY

President: Dr. L. L. Shamburger, Richmond; vice-president, Dr. Walter McMann, Danville; secretary-treasurer, Dr. W. D. Suggs, Richmond.

VIRGINIA ORTHOPEDIC SOCIETY

President, Dr. James T. Tucker, Richmond; vice-president, Dr. George A. Duncan, Norfolk; secretary-treasurer, Dr. H. H. Wescott, Roanoke.

VIRGINIA PEDIATRIC SOCIETY

President, Dr. Paul Hogg, Newport News; vice-president, Dr. Charles P. Brown, Norfolk; secretary-treasurer, Dr. Louise Galvin, Richmond.

VIRGINIA RADIOLOGICAL SOCIETY

President, Dr. Vincent W. Archer, Charlottesville; vice-president, Dr. R. A. Davis, Newport News; secretary-treasurer, Dr. Philip B. Parsons, Norfolk.

VIRGINIA SOCIETY OF PATHOLOGY AND LABORATORY MEDICINE

President, Dr. M. B. Beecroft, Newport News; vice-president, Dr. Lawrence J. Motyca, Norfolk; secretary-treasurer, Dr. M. L. Dreyfuss, Clifton Forge. Dr. J. H. Scherer, Richmond, was recommended as councilor from Virginia to the American Society of Clinical Pathologists.

VIRGINIA UROLOGICAL SOCIETY

President, Dr. W. W. S. Butler, Roanoke; vice-president, Dr. Charles M. Nelson, Richmond; secretary-treasurer, Dr. W. W. Koontz, Lynchburg.

VIRGINIA SECTION, AMERICAN COLLEGE OF PHYSICIANS

Chairman, Dr. Charles M. Caravati, Richmond; secretary, Dr. J. F. Waddill, Norfolk. Dr. J. Edwin Wood, Jr., Charlottesville, is the Governor for Virginia.

News from the University of Virginia, Department of Medicine.

Dr. Oscar Swineford, Jr., Professor of Practice of Medicine, has been appointed Branch 4 Area Consultant in Allergy for the Veterans Administration for Virginia, West Virginia, North Carolina, Maryland, and the District of Columbia.

Mr. Edward R. Stettinius, Rector of the Board of Visitors of the University, has been appointed to the Board of Trustees of the American Allergy Fund. Dr. Oscar Swineford, Jr., is a member of the Medical Board of Trustees, and Dr. William Henry Sebrell of the United States Public Health Service, is a member of the Scientific Advisory Council.

On October 3rd, Dr. Oscar Swineford, Jr., spoke in Johnson City, Tennessee, to the County Medical Society on "The Management of Asthma". On October 11th, he took part in an orientation course in Allergy, conducted by the Marquette University Medical School under the sponsorship of the American Academy of Allergy, and lectured on "The Diagnosis and the Classification of Asthma", "Physical Allergy", and "Cardiac Asthma".

Dr. Fletcher D. Woodward, Professor of Otolaryngology, will participate in the program of the Pan American Congress of Otolaryngology in Chicago on October 18th.

Cancer Control Is a Major Health Program.

The Joint Committee on Health Problems in Education of the National Education and American Medical Associations, meeting at Chicago in May, 1946, adopted the following statement, and authorized its publication:

Cancer control is a major health problem in the United States. As such, it merits attention not only in programs of research, but also in programs of education. Instruction concerning the nature of cancer and known methods of prevention and control should be included in the high school course of study, along with other important health problems facing the American people today. High school students are interested in such information. Scientific facts should be taught to them so that fears may be allayed, intelligent action as future adults be promoted, and families favorably influenced by the information which students relay to adult relatives.

The American Gynecological Society

Has set dates for its next meeting as June 17, 18 and 19. This will be held under the presidency of Dr. Norris W. Vaux of Philadelphia at Seignoiry Club, Monte-Bello, Quebec. Further information may be obtained from the secretary, Dr. Norman Miller of Ann Arbor, Michigan.

Dr. Wiley D. Lewis,

Formerly at St. Albans Sanatorium, Radford, is now on the staff of the Highland Hospital, Asheville, North Carolina.

Dr. T. E. Stanley

Formerly located at Beaverdam in Hanover County, is now with the Newton D. Baker Hospital, Martinsburg, West Virginia.

Changes at Saint Albans Hospital.

Dr. Daniel D. Chiles, recently of Orchard Park, New York, is now affiliated with this hospital. He is a graduate of Vanderbilt University, class of 1938, and for the past seven years has served as a psychiatrist for the United States Public Health Service.

Dr. Joseph M. Dixon of Roanoke has also recently become associated in the work.

Dr. A. I. Dodson,

Richmond, was one of the guest speakers at the meeting of the Medical Society of the State of Pennsylvania on October 8th. He was also recently appointed as a member of the editorial board of the Quarterly Review of Urology, published in Washington.

Dr. John S. Howe

Resigned as professor of pathology at the Medical College of Virginia, effective September 1st, to accept an appointment as pathologist and director of laboratories at the Methodist Hospital, Brooklyn, New York.

Dr. B. M. Kagan,

Who practiced in Richmond prior to entering the Service, has located in Chicago where he has taken the position of Director of Pediatric Research at the Michael Reese Hospital.

Dr. Norman G. Patterson,

Who practiced for several years at the Clinch Valley Clinic in Richlands, has moved to Bristol, Tenn., where he has offices in the Electric Power Building. He will specialize in surgery and gynecology.

Campaign to Combat Heart Disease.

The initiation of a nationwide program of public education and information on diseases of the heart has been announced by officials of the American Heart Association. According to Dr. Howard F. West of Los Angeles, President of the Association, the program will have as its prime purpose "the dissemination of educational information to the public in a broad effort to retard the rapid increase of heart disease throughout the nation." It is estimated that there are more than 4,000,000 people in the United States today who have heart disease. There were more deaths from heart disease than from the total of the five other leading causes in 1944, and heart diseases are responsible for an annual loss of more than 100,000,000 work days.

The educational campaign of the Association will reach its climax during National Heart Week to begin on February 9, 1947.

Dr. William Branch Porter, Richmond, is one of the directors of the American Heart Association.

Congress on Obstetrics and Gynecology.

The Third American Congress on Obstetrics and Gynecology will be held September 8-12, 1947, in the Municipal Auditorium in St. Louis, Missouri. Dr. Fred L. Adair of Chicago is General Chairman.

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Southeastern Allergy Association.

The second annual meeting of this Association will be held January 18th and 19th, 1947, at The Atlanta-Biltmore Hotel, Atlanta, Georgia. Dr. Hal McCluney Davison, Atlanta, is president; Dr. Warrick Thomas, Richmond, vice-president; and Dr. Katherine Baylis MacInnis, Columbia, South Carolina, secretary-treasurer.

Hotel reservations should be made directly with the hotel.

Dr. Paul J. Bundy,

Recently of Dante, has moved to Mountain City, Tennessee, where he is engaged in general practice.

Protect Your Future—Buy Your Extra Bonds Now

Is the slogan of a campaign from November 11 to December 7, to urge Americans to take an extra step toward financial security—individual security, community business advancement, and national prosperity—by the purchase of EXTRA U. S. Savings Bonds now.

Dr. Nat Wooding

Announces his separation from Service with the U. S. Army Medical Corps and the opening of his office for the general practice of medicine at Halifax. He graduated from Long Island College of Medicine in 1943 and, after internship at the Medical College of Virginia Hospitals, was at two general hospitals and later at a Station Hospital where he was engaged in neuropsychiatry.

Scientific Exhibit—American Medical Association.

At the Centennial Session of the American Medical Association to be held in Atlantic City, June 9 to 13, 1947, the Scientific Exhibit will include both the history of medicine during the past century and the latest developments of medical science.

Application blanks for space are now available. All applicants must fill out the regular form. Applications close on January 13, 1947, after which time the Committee on Scientific Exhibit will make its decision and notify the applicants.

Application blanks for space should be procured as soon as possible. They are available from The Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Post-Graduate Course in Ophthalmology and Otolaryngology.

The annual post-graduate course in Ophthalmology and Otolaryngology will be held at the University of Virginia Hospital, Charlottesville, December 9-12, inclusive, the first two days being given to Ophthalmology and the last two to Otolaryngology so that anyone interested in only part of the course may arrange accordingly. Information as to fees and other details, may be secured from Dr. Fletcher D. Woodward, Box 98, Charlottesville, Va. Program for this course is published in the Forum of this issue of the MONTHLY.

Dr. John W. Martin,

Formerly of Roanoke Rapids, North Carolina, has located at Yorktown. He is an alumnus of the Medical College of Virginia.

Dr. Ben L. Boynton,

Formerly of Norfolk, is now Director of Physical Medicine at the West Texas Memorial Hospital in San Angelo.

Dr. Gordon Willis Jones,

Class of '40, Johns Hopkins University Medical School, recently returned from Service, announces the opening of an office in the Professional Building, Fredericksburg. His practice will be limited to the field of obstetrics and gynecology.

Resigns as Richmond Health Director.

Dr. Jack B. Porterfield has tendered his resignation as director of the Department of Health of the City of Richmond, effective November 15. He will be succeeded by Dr. Charles Howe Eller, now connected with the faculty of Johns Hopkins Medical School. Dr. Eller is not a stranger here, having been a former director of Rural Health with the State Health Department and also health officer for Charlottesville and Albemarle County.

Fourth Refresher Course in General Medicine

The Fourth Refresher Course in General Medicine was held at the Medical College of Virginia, September 9-21, 1946. This was the last of four such courses sponsored by the Medical Society of Virginia, and given alternately every three months by the University of Virginia and the Medical College of Virginia.

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Throughout each day of the two weeks, there were lectures, clinics, and ward rounds by members of the faculty. The program on September 13, was presented by members of the staff of the Veterans Administration Hospital.

The evening sessions were given over to invited guest speakers, as follows: Dr. John H. Dingle, Western Reserve University School of Medicine, "Influenza" and "Primary Atypical Pneumonia"; Dr. E. C. Drash, University of Virginia School of Medicine, "Surgery of Pulmonary Tuberculosis"; Dr. Walter Kempner, Duke University School of Medicine, "The Rice Diet in Hypertension and Nephritis"; Dr. L. J. Roper, State Commissioner of Health, "Recent Legislation Involving Activities of the State Department of Health"; Dr. Joseph F. Ross, Boston University School of Medicine, "Radioactive Isotopes and Their Application to Medical Investigation" and "Therapeutic Applications of Artificial Radioactivity"; and Dr. Robert Ross, Duke University School of Medicine, "Female Endocrinology".

Thirty physicians enrolled in and attended the course. Of these, nineteen were Veterans, ten were in the Veterans Administration, and one was a civilian doctor.

National Gastroenterological Association 1947 Award Contest.

The Association has announced its Annual Cash Prize Award Contest for 1947. One hundred dollars and a Certificate of Merit will be given for the best unpublished contribution on Gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country.

The decision of the judges will be final. The Association reserves the exclusive right of publishing the winning contribution, and those receiving certificates of merit, in its Official Publication, *The Review of Gastroenterology*. All entries for the 1947 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies, accompanied by an entry letter, and must be received not later than April 1, 1947. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

Married.

Dr. DeArmond Moore, Charlotte, N. C., and Miss Leona Rose Olander, Pittsburgh, Pa., October 8th. He is a graduate of the Medical College of Virginia in 1945. They will make their home in Richmond.

Lt. (jg) Frederick Victor Vance, Jr., (MC), USNR, Bristol, Tenn., and Miss Ann Lyttelton Waddell, University, October 5th. He is a graduate in medicine from the University of Virginia, class of 1945.

Virginia League for Planned Parenthood.

Dr. H. Hudnall Ware, Jr., Richmond, was re-elected president of the League at its annual meeting in October. Dr. M. Pierce Rucker, Richmond, was re-elected chairman of the medical advisory committee, with the following members: Dr. C. J. Andrews, Norfolk; Dr. B. B. Bagby, Edwardsville; Dr. Dean B. Cole, Richmond; Dr. A. M. Groseclose, Roanoke; Dr. W. R. Payne, Newport News; Dr. F. O. Plunkett, Lynchburg; Dr. H. Hudnall Ware, Richmond; and Dr. T. J. Williams, University.

Dr. John O. McNeel,

Recently located at Marlinton, West Virginia, is now with the Medical Security Clinic in Seattle, Washington. Prior to entering the Service, Dr. McNeel was connected with the University of Virginia Hospital at Charlottesville.

Dr. W. C. Mason,

Formerly of Gordonsville, has accepted a position with the Veterans Administration in the Regional Office, Out-Patient Department, at Roanoke.

Dr. John T. Hazel,

Having completed a Fellowship in General Surgery at the Mayo Clinic, has opened his former office at Wilson Boulevard and Kenmore Street, Arlington.

American Academy of Dermatology and Syphilology.

The fifth annual meeting of the Academy will be held in Cleveland, Ohio, December 7-12, under the presidency of Dr. George M. MacKee, New York City. This will be the first meeting of the group since 1941 and it is expected that more than 1,000 members will attend. There will be extensive

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scientific and commercial exhibits held in connection with the meeting, which will feature special lectures by members of the Academy and by famed authorities in such other fields as atomic energy, radiology, and surgery. The Academy is chiefly concerned with teaching and in consequence the entire session will be a sort of "post-graduate" seminar. Dr. Earl D. Osborne, Buffalo, New York, is secretary of the Academy.

Have You Something for Parergon?

The new edition of *Parergon* is now in preparation. If you wish to have any of your art works (oils, watercolors, sculptures, drawings, pastels, prints, etchings, engravings, lithographs, woodblocks, linoleum blocks, photographs, colored photographs, ceramics, woodwork, metalwork, jewelry, needlework, shipmodels) considered for inclusion in the forthcoming edition (over 750 pictures) please mail perfect glossy photo prints (8x10 preferred) immediately by airmail to Editor, *Parergon,* Mead Johnson & Company, Evansville 21, Indiana, U.S. A.—now!

Fairfax Health Officer.

Dr. Thomas Scarlett resigned as Health Officer of Fairfax County, effective October 15, and Dr. Henry C. Bradford, recently returned from Service, was appointed to fill this vacancy.

Dr. George S. Bowers,

Who practiced for a short time in Richmond upon his return from military service, is now associated with Dr. Paul M. Holmes in Toledo, Ohio, with offices at 316 Michigan Street. Their practice is limited to internal medicine and diseases of the chest.

Dr. Arthur Morton Smith

Has recently returned from active duty in the Army, and has reopened his office at 409 National Bank Building, Charlottesville. He will limit his practice to surgery and gynecology.

The American Academy of Allergy

Will hold its annual convention at Hotel Pennsylvania, New York City, November 25-27, inclusive. All physicians interested in allergic problems are cordially invited to attend the sessions as guests of the Academy without payment of registration fee. The program has been arranged to cover a wide variety of conditions where allergic factors may be important. Papers will be presented dealing with the latest methods of diagnosis and treatment as well as the results of investigation and research. Advance copies of the program may be obtained by writing to the Chairman on Arrangements, Dr. Horace S. Baldwin, 136 East 64th Street, New York City, prior to November 10th.

Southern Psychiatric Association.

The annual meeting of this Association was held in Richmond, October 7th and 8th, under the presidency of Dr. Whitman C. McConnell of St. Petersburg, Florida. Dr. Robert H. Felix, Washington, D. C., was installed as president in place of Dr. James K. Hall, Richmond, who resigned on account of illness. Other officers are: vice-president, Dr. J. Asa Shield, Richmond; councilors, Drs. R. Burke Suitt, Durham, N. C., and Guy Witt, Dallas, Texas; and secretary-treasurer, Dr. Newdigate M. Owensby, Atlanta, Ga. (re-elected).

Wanted.

Laboratory Technician. Apply Dr. Snowden C. Hall, Jr., 705½ Main Street, Danville, Virginia. Telephone 3530. (*Adv.*)

Doctor Wanted.

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For Sale.

GE X-ray, Model 1775, 30 ma, 85 KVP, table with Bucky. In excellent working condition. James P. King, M. D., Radford, Virginia. (*Adv.*)

Wanted:

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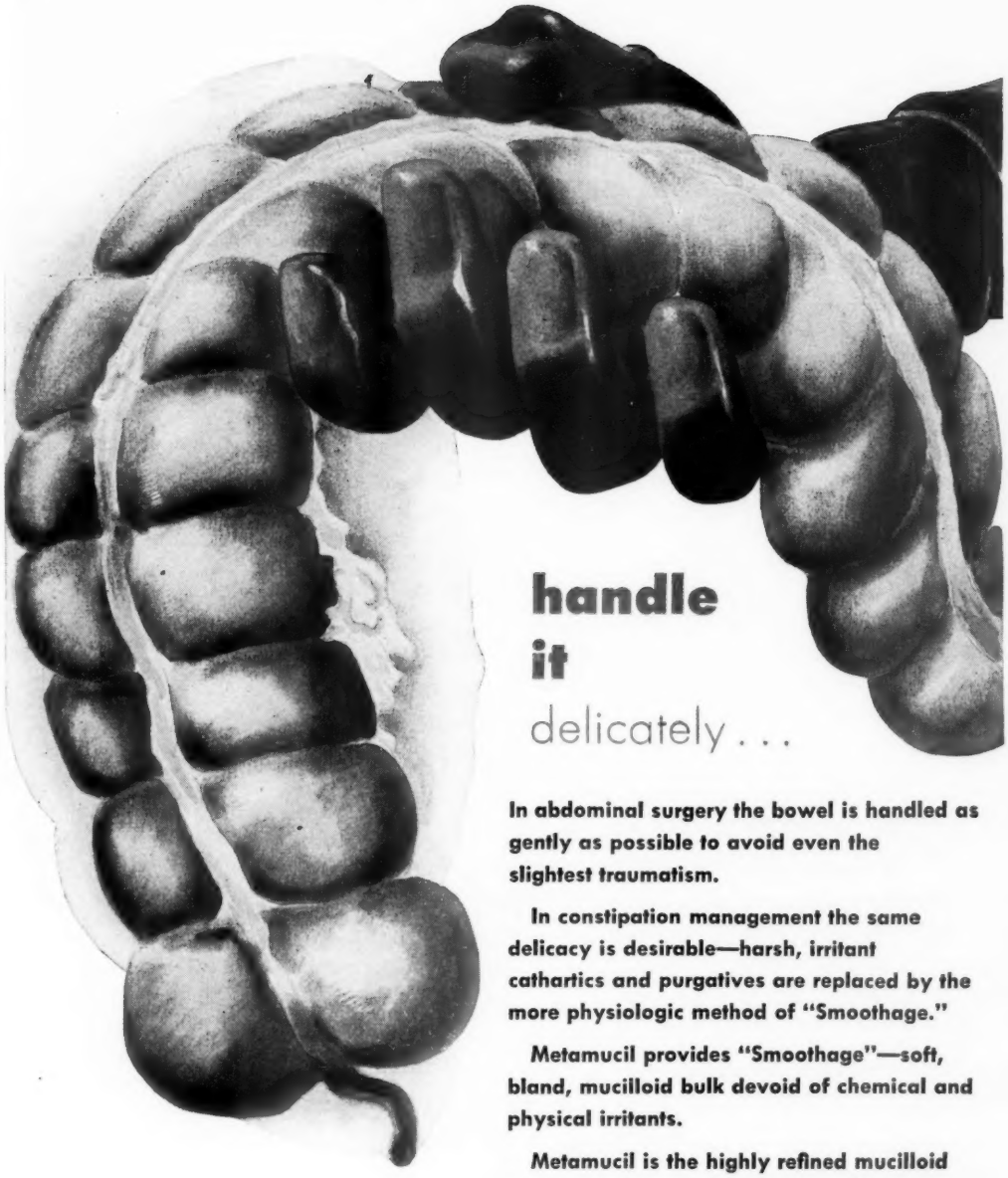

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OBITUARIES

Dr. William Preston Burton,

Prominent surgeon of Covington, was killed in an airplane crash near Christiansburg on October 20th. He and his brother, Dr. Gilbert Burton, a dentist, were on their way to South Dakota for a pheasant shoot. Apparently due to a heavy fog the plane hit a tree which tore off a wing causing it to crash into the mountain. Both doctors and the pilot were instantly killed. Dr. Burton was forty-eight years of age and a graduate of the Jefferson Medical College in 1923. He practiced for some years in Pocahontas County, West Virginia, before moving to Covington, where in 1931 he opened the Covington Hospital. He had been a member of the Medical Society of Virginia for twenty-one years. His wife and a daughter survive him.

Dr. Claudius James Riddick,

Prominent physician of Suffolk, died October 18th. He was eighty-seven years of age and graduated from the Bellevue Hospital Medical College, New York, in 1890. Dr. Riddick had practiced in Suffolk for more than half a century. He was formerly physician for Nansemond County and surgeon for the Virginian Railway. He had been a member of the Medical Society of Virginia for fifty-six years. A daughter and a son survive him.

Dr. Raymond William Paul,

Well known Richmond physician, died September 22nd after an illness of about two weeks. He was fifty-three years of age and graduated from the Medical College of Virginia in 1918. Dr. Paul specialized in proctology and had practiced in Richmond for twenty-seven years. He had been a member of the Medical Society of Virginia since 1920. His wife and two children survive him.

Dr. Robert Edward Timberlake,

Well known Richmond physician, died October 27th. He was fifty-six years of age and a graduate of the Medical College of Virginia in 1914. Dr. Timberlake has been a physician for the Health Department of the City of Richmond for twenty-seven years in addition to having maintained a private practice for more than thirty years. Dr. Timberlake was a member of the Medical Society of Virginia. His wife and three daughters survive him.

Dr. Edward Newton Lillard,

Madison, died October 9th, at the age of seventy-four. He was a graduate of the Medical College of Virginia in 1901. Dr. Lillard had practiced at Stanardsville and Ocean View before locating in Madison about fifteen years ago. He had been a member of the Medical Society of Virginia for forty-five years. His wife survives him.

Dr. Elliott DeJarnette,

Ashland, died October 21st after a long illness, at the age of seventy-three. He received his medical degree from the University of Virginia in 1897 and had practiced for more than forty years in Ashland. A son survives him.

Dr. Richard E. Wilkinson,

McKenney, died September 29th after an illness of more than a month. He was eighty years of age and a graduate of the Medical College of Virginia in 1897. Seven children survive him.

Dr. William Chapman Chilton, Jr.,

Appomattox, died September 20th. He was thirty-three years of age and a graduate of the Medical College of Virginia in 1943. Dr. Chilton served as a captain in the Medical Corps of the United States Army during World War II and only recently returned from Europe.

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New and Nonofficial Remedies, 1946. Containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1946. Chicago: American Medical Association, 1946. Cloth. Price, postpaid, $1.50. 770 pages.

New and Nonofficial Remedies is the book in which are listed and described the medicinal preparations which the Council on Pharmacy and Chemistry has found acceptable, under its rules, for the use of physicians. To have a product accepted, the manufacturer must declare its composition, give adequate proof of its therapeutic value and market it with claims which have been found valid by the Council. The present volume represents a cumulative epitome of the Council's work since its foundation in 1905.

Accepted preparations are grouped in twenty-four classifications ranging from Allergenic Preparations to Vitamins. Ordinarily, an inclusive general article precedes the description of the various products. The monograph for the products set forth the actions, uses and dosage and usually a set of tests and standards. As its name implies, the book is intended to describe nonofficial preparations, that is preparations which are not included in such official publications as the Pharmacopeia and the National Formulary. However, some official articles are listed and described, these being in general those for which the Council feels the practicing physician needs concise and authorative information. In the preface of the present volume, the Council lists some thirty-five official drugs ranging from acetylsalicylic acid to Strophanthin, which the Council feels it no longer necessary to consider for inclusion in the book.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1945. Chicago: American Medical Association, 1946. 122 Pages. Cloth. Price, postpaid, $1.00.

Originally intended chiefly as a repository of its reports on rejection of preparations found unacceptable for inclusion in New and Nonofficial Remedies or of status reports on products whose therapeutic value has not yet been established, this volume in recent years has been composed mainly of reports giving general information to the physician on the status of various therapeutic agents and therapeutic procedures. Most of these reports have previously been published in The Journal A.M.A. The reports in the present volume emphasize the educational nature of the Council's work and bear witness to its leadership in the consideration of current therapeutic problems.

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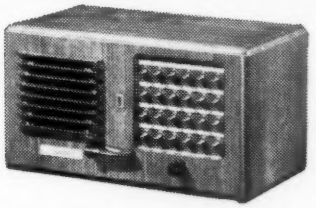

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Investigators Find Nearly 300 Cancer Producing Agents.

"Even the most pessimistic scientist cannot possibly read of the progress made in cancer research during the last 30 years without thrilling at the accomplishments and the spirit of success that fairly permeate this field," according to an article in the current issue of *Hygeia,* health magazine of the American Medical Association.

The author—Arthur H. Wells, M.D., Chairman of the Committee on Cancer of the Minnesota State Medical Society—states that "approximately 300 physical, chemical and infectious agents have been found to produce cancer. Many authorities admit that there is an ever increasing variety of agents being discovered which will initiate cancer growth. However, they refer to Ewing's casual genesis and formal genesis of cancer. The first has to do with the wide variety of substances that will produce cancer and the second to the factors within the cancer cell that are responsible for its nature and its unlimited growth capacity. The most important progress in the future appears to lie in a thorough understanding of the formal genesis of cancer.

"Listed among the cancerous agents are analine dyes, petroleum products, illuminating gas, coke, mineral and lubricating oils, textile products, radium bearing ores, cobalt and arsenic, chromates, nickel, carbonyl, asbestos, mesothorium, anthracene oil, aromatic amino compounds, benzol, ultraviolet rays, roentgen rays and others. These products are found in industries and necessitate protection of those exposed to the products."